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Set	Items	Description
S1	1460695	CONTROLL?
S2	70128	RH OR RHM OR (REQ? ? OR REQUEST?) (2N) (HANDL?)
S3	452305	DATABASE?
S4	3937	S3(2N) (ID? ? OR IDENTIF?)
S5	53	(GENERAT? OR CREAT? OR PRODUC?) (2N) S4
S6	1695908	NETWORK?
S7	2538	S1 AND S2
S8	95695	S1 AND S6
S9	64	S8 AND S2
S10	0	S9 AND S4
S11	11	S8 AND S4
S12	586615	NETWORK?/TI
S13	54656	S3(2N) MANAG?
S14	1678	S12 AND S13
S15	4411338	CONTROL? ?
S16	67	S14 AND S1
S17	394	S14 AND S15
S18	6	S16 AND HANDL?
S19	27	S17 AND HANDL?
S20	0	(S18 OR S19) AND S2
S21	2	S17 AND S2
S22	62126	S3 AND S6
S23	8441	S22 AND S13
S24	10	S23 AND S2
S25	35	S23 AND S4
S26	45	S24 OR S25
S27	108579	SERVER?
S28	4	(S25 OR S26) AND S27
S29	436	S3(2N) INSTANC?
S30	43538	S27(3N) CLIENT?

S31	13	S30 AND S4
S32	817	S3(2N)LOAD?
S33	1148	S3(3N)LOAD?
S34	69	S27 AND S33
S35	25	S22 AND S34
S36	25	S35 AND (S1 OR S2 OR S6)
S37	3	S36 AND S13
S38	933	REQUEST?(3N)HANDL?
S39	31501	(ASSIGN? OR MAP? OR RE(W)ASSIGN? OR RE(W)MAP?) AND S3
S40	3089	S39 AND S13
S41	82	S40 AND S30
S42	0	S41 AND S33
S43	4	S41 AND LOAD?
S44	82	S41 AND S30
S45	1	S44 AND S2
S46	0	S44 AND S4
S47	14	S21 OR S28 OR S37 OR S43 OR S45
S48	7	S44 AND HANDL?
S49	20	S47 OR S48
S50	26	S49 OR S18
S51	122742	S3/TI
S52	706566	S51 OR S12
S53	285	S52 AND S2
S54	0	S4 AND S53
S55	16	S53 AND (ID? ? OR IDENTIF?)
S56	0	S55 AND S39
S57	31501	S3(3N)S39
S58	245	S57(3N)S27
S59	89	S58 AND S52
S60	6	S59 AND S1
S61	0	S59 AND S2
S62	7	S59 AND HANDL?
S63	18	S59 AND S13
S64	0	S63 AND INSTANC?
S65	13	S60 OR S62
S66	246	S27(2N)(CHOOS? OR CHOICE?)
S67	0	S63 AND S66
S68	1	S58 AND S66
S69	38	S50 OR S60 OR S62 OR S68
S70	65	S24 OR S31 OR S47 OR S55 OR S63
S71	49	S70 NOT S69
S72	34	RD S69 (unique items)

? t s34/7,de/1-34

34/7,DE/1 (Item 1 from file: 8)  
 DIALOG(R)File 8:Ei Compendex(R)  
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06765618

E.I. No: EIP04128071097  
 Title: 2003 International Conference on Machine Learning and Cybernetics:  
 Volume 1  
 Author: Anon (Ed.)  
 Conference Title: 2003 International Conference on Machine Learning and  
 Cybernetics  
 Conference Location: Xi'an, China Conference Date: 20031102-20031105

Sponsor: IEEE SMCTC; Hebei Univeristy; Northwestern Polytechnical University

E.I. Conference No.: 62422

Source: International Conference on Machine Learning and Cybernetics v 1 2003. (IEEE cat n 03EX693)

Publication Year: 2003

ISBN: 0780378652

Language: English

Document Type: CP; (Conference Review) Treatment: T; (Theoretical)

Journal Announcement: 0403W4

Abstract: The proceedings contains 127 papers from the 2003 International Conference on Machine Learning and Cybernetics: Volume 1. The topics discussed include: generation of frequent Fuzzy states evolution rules; dynamic load balancing algorithms for sequence mining; studies on Chinese web page classification; a simple and efficient classifying algorithm; sentences clustering based automatic summarization; a fast algorithm for building concept lattice and the study of association algorithm BGL based on binary system and oriented graph. (Edited abstract)

Descriptors: Data mining; Time series analysis; Parallel processing systems; Data reduction; **Database** systems; Dynamic loads; World Wide Web; Online searching; Theorem proving; Set theory; **Servers**; Electronic mail; Problem solving

34/7,DE/2 (Item 2 from file: 8)

DIALOG(R)File 8:EI Compendex(R)

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06030058

E.I. No: EIP02146904877

Title: User query interface for the deep-foundations **load-test database**

Author: Satyanarayana, Raghavendra; Ealy, Carl D.; Dimillio, Albert F.; Kalavar, Shesh R.

Corporate Source: Eng. and Software Consultants, Inc., Fairfax, VA 22030, United States

Source: Transportation Research Record n 1755 2001. p 3-14 01-3324

Publication Year: 2001

CODEN: TRREDM ISSN: 0361-1981

Language: English

Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)

Journal Announcement: 0204W1

Abstract: The deep-foundation **load-test database** is a result of research quality data collection over the past 15 years. The database consists of soils data along with the deep-foundations load-test data gathered from prototype tests conducted all over the world. The soils data include general site information, stratigraphy, laboratory, and in situ test details. The foundations data consist of general foundations information including foundation construction, and load-settlement information to failure. Over 1,000 foundations are currently in the database, and more are being added. The database is checked for its validity and correctness both before and after the data are added to the database to make sure that the data integrity is preserved. Also, the data are periodically backed up and the data input is strictly administered by providing controlled access to the designated individuals. The database is structured to follow the rules of relational database management system (RDBMS). The database resides in a Unix-based Sun Solaris **server**,

and the database engine is Sybase RDBMS. The database front-end query application is under development for the Internet using Java as the programming language and will run under any Internet-capable browser (e.g., Netscape, Microsoft Internet Explorer) environment. The application will use Java applets to communicate with the database **server**. The user community includes state highway engineers, geotechnical researchers, students, and practicing engineers. Interested users can access the database using the interface to view, download, and chart the data at run-time. 1 Refs.

Descriptors: \*Load testing; Soil mechanics; File foundations; Relational database systems; User interfaces; Query languages; Soil testing; Stratigraphy; Road construction; Settlement of structures; Failure (mechanical); Data acquisition; Java programming language

34/7,DE/3 (Item 3 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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05988633

E.I. No: EIP02036826709  
Title: WebFrame: A Web application **server** framework  
Author: Qin, F.; Zhang, B.; Li, J.  
Corporate Source: Lab. of Comp. Sci. Inst. of Software Chinese Acad. of Sci., Beijing 100080, China  
Source: Ruan Jian Xue Bao/Journal of Software v 12 n SUPPL. June 2001. p 152-155  
Publication Year: 2001  
CODEN: RUXUEW ISSN: 1000-9825  
Language: Chinese  
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)  
Journal Announcement: 0201W3  
Abstract: As a Web application **server** framework, WebFrame is designed to improve the availability and security for Web distributed applications, and to solve related problems such as scalability, load balancing, re-connection to database, security and performance etc. We introduce WebFrame architecture and its technological features. (Edited abstract) 7 Refs.  
Descriptors: World Wide Web; Client **server** computer systems; **Servers**; Distributed database systems; Security of data; Performance; Computer architecture

34/7,DE/4 (Item 4 from file: 8)  
DIALOG(R)File 8:EI Compendex(R)  
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05921311

E.I. No: EIP01385473039  
Title: Evolutionary algorithm performance profiles on the adaptive distributed database management problem  
Author: Oates, M.J.  
Source: BT Technology Journal v 18 n 4 2000. p 66-77  
Publication Year: 2000  
CODEN: BTTJEY ISSN: 0265-0193  
Language: English  
Document Type: JA; (Journal Article) Treatment: T; (Theoretical); X;

(Experimental)

Journal Announcement: 0110W4

Abstract: Evolutionary algorithms have been shown to be effective in providing configuration optimisation to dynamic **load** balancing in distributed **database** systems and Web **servers**. This paper explores the tuning parameter performance profile of such techniques over a variety of problems, including the adaptive distributed database management problem (ADDMP), focusing on a range of interesting and important features. The ability of the evolutionary search process to reliably find good solutions to a dynamic problem in a minimal and consistent run-time is of paramount importance when considering their application to real-time industrial control problems. This paper demonstrates the existence of certain optimal parameter values, particularly for the rate of applied mutation, which are shown to produce consistently good problem solutions in a low number of evaluations with a minimum standard deviation. (Author abstract) 27 Refs.

Descriptors: \*Genetic algorithms; Distributed database systems; Information management; World Wide Web; Performance; Industrial applications; Control

34/7,DE/5 (Item 5 from file: 8)  
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05675209

E.I. No: EIP00105365504

Title: Selecting and implementing an embedded database system

Author: Olson, Michael A.

Corporate Source: Sleepycat Software

Source: Computer v 33 n 9 Sep 2000. p 27-34

Publication Year: 2000

CODEN: CPTRB4 ISSN: 0018-9162

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 0011W4

Abstract: Today, the computing landscape is much richer and more diverse than it was even a decade ago. Developers can choose from a wide variety of hardware, operating systems, and tools for the embedded systems they build. This article explains that despite the differences of these platforms and tools, embedded systems share important characteristics with the desktop and **server** systems they supplant.

Descriptors: Embedded systems; Database systems; Personal computers; Client **server** computer systems; Computer software selection and evaluation; Object oriented programming; Response time (computer systems); Online searching; Data transfer; Performance

34/7,DE/6 (Item 6 from file: 8)  
DIALOG(R) File 8: Ei Compendex(R)  
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05392980

E.I. No: E2099104835280

Title: Site selection for real-time client request handling

Author: Kanitkar, Vinay; Delis, Alex

Corporate Source: Polytechnic Univ, Brooklyn, NY, USA

Conference Title: Proceedings of the 1999 19th IEEE International

Conference on Distributed Computing Systems (ICDCS'99)

Conference Location: Austin, TX, USA Conference Date: 19990531-19990604

Sponsor: IEEE Computer Society

E.I. Conference No.: 55373

Source: Proceedings - International Conference on Distributed Computing Systems 1999. p 298-305

Publication Year: 1999

CODEN: PICSEJ ISBN: 0-7695-0222-9

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9911W4

Abstract: In a conventional client-**server** database system (CS-DBS), a transaction and its requisite data have to be colocated at a single site for the operation to proceed. This has traditionally been achieved by moving either the data or the transaction. Today, the availability of powerful workstations and high-bandwidth networking options has led users to expect real-time guarantees about the completion times of their tasks. So as to offer such guarantees in a CS-DBS, a transaction should be processed by any means that allows it to meet its deadline. In this paper, we explore the option of moving both transactions and data to the most promising sites for successful completion. We propose a load-sharing mechanism that oversees the shipment of data and transactions in order to increase the efficiency of a client-**server** cluster. Additionally, we make use of the concept of grouped locks to schedule the movement of data objects in the cluster in a more efficient manner. An experimental evaluation shows that the use of our load-sharing algorithm provides a considerable improvement in the real-time processing efficiency of a CS-DBS even in the presence of very high volumes of update transactions. (Author abstract) 26 Refs.

Descriptors: Data transfer; Database systems; Client **server** computer systems; Storage allocation (computer); Algorithms; Information retrieval systems; Network protocols

34/7,DE/7 (Item 7 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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05281064

E.I. No: EIP99054670099

Title: Private information retrieval

Author: Chor, Benny; Goldreich, Oded; Kushilevitz, Eyal; Sudan, Madhu

Corporate Source: Technion, Haifa, Isr

Source: Journal of the ACM v 45 n 6 Nov 1998. p 965-982

Publication Year: 1998

CODEN: JOACF6 ISSN: 0004-5411

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 9907W1

Abstract: Publicly accessible databases are an indispensable resource for retrieving up-to-date information. But they also pose a significant risk to the privacy of the user, since a curious database operator can follow the user's queries and infer what the user is after. Indeed, in cases where the users' intentions are to be kept secret, users are often cautious about accessing the database. It can be shown that when accessing a single database, to completely guarantee the privacy of the user, the whole **database** should be down-loaded; namely n bits should be communicated (where n is the number of bits in the database). In this work,

we investigate whether by replicating the database, more efficient solutions to the private retrieval problem can be obtained. We describe schemes that enable a user to access  $k$  replicated copies of a database ( $k$  greater than equivalent to 2) and privately retrieve information stored in the database. This means that each individual **server** (holding a replicated copy of the database) gets no information on the identity of the item retrieved by the user. Our schemes use the replication to gain substantial saving. In particular, we present a two-**server** scheme with communication complexity  $O(n^{1/2})$ . (Author abstract) 27 Refs.

Descriptors: Information retrieval systems; Distributed database systems; Query languages; Security of data; Data acquisition; Client **server** computer systems; Computer systems programming; Computational complexity

34/7,DE/8 (Item 8 from file: 8)  
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04905701

E.I. No: EIP98013999058  
Title: Client-**server** performance on flow-controlled ATM networks: A web database of simulation results  
Author: Kung, H.T.; Wang, S.Y.  
Corporate Source: Harvard Univ, Cambridge, MA, USA  
Conference Title: Proceedings of the 1997 16th IEEE Annual Conference on Computer Communications, INFOCOM. Part 3 (of 3)  
Conference Location: Kobe, Jpn Conference Date: 19970407-19970412  
Sponsor: IEEE  
E.I. Conference No.: 47574  
Source: Proceedings - IEEE INFOCOM v 3 1997. IEEE, Piscataway, NJ, USA, 97CB36034. p 1218-1226  
Publication Year: 1997  
CODEN: PINFEZ ISSN: 0743-166X  
Language: English  
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)  
Journal Announcement: 9803W1

Abstract: Extensive simulation has demonstrated the effectiveness of credit-based ATM flow control in supporting client-**server** applications. In particular, request/response protocols used in these applications allow efficient sharing of switch buffer, for the case when all the VCs sharing the same buffer are subject to the same degree of downstream congestion. The required buffer size can be as small as the minimum of bandwidth\*RTT for the link and #Clients\*Reply Size. Request/response protocols generally tolerate congestion better than greedy loads. Being able to avoid synchronization, FIFO scheduling is sometimes more efficient than VC round-robin scheduling. These findings are derived from an online Web database of simulation results covering more than 10,000 network and load configurations. The Web **database** approach has proven to be effective in managing and navigating a large set of simulation results. (Author abstract) 15 Refs.

Descriptors: \*Asynchronous transfer mode; Network protocols; Wide area networks; Distributed database systems; Bandwidth; Congestion control (communication); Telecommunication links; Computer simulation; Synchronization

34/7,DE/9 (Item 9 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)

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04894787

E.I. No: EIP97123967117

Title: Dynamic dividends

Author: Bruno, Lee

Source: Data Communications v 26 n 15 Nov 1997. p 101-104, 106, 108

Publication Year: 1997

CODEN: DACODM ISSN: 0363-6399

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9802W3

Abstract: Web application **servers** lift the processing load off **databases**. They also speed access to updated information while easing the use of the Web. It is identified that the reasons for are that there is no need to write new HTML pages, no need for common gate interface scripts, and no need for an SQL programmer.

Descriptors: \*Computer networks; Database systems; Data processing; Information technology; User interfaces; Computer programming

34/7,DE/10 (Item 10 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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04554137

E.I. No: EIP96110409352

Title: 24 hours load forecasting for the energy management system on Crete - online training and forecasting of load data

Author: Bitzer, B.; Roesser, F.; Papazoglou, T.M.

Corporate Source: Univ of Paderborn, Paderborn, Ger

Conference Title: Proceedings of the 1996 31st Universities Power Engineering Conference. Part 1 (of 3)

Conference Location: Iraklio, Greece Conference Date: 19960918-19960920

E.I. Conference No.: 45592

Source: Proceedings of the Universities Power Engineering Conference v 1 1996. Technological Educational Institute, Iraklio, Greece. p 346-349

Publication Year: 1996

CODEN: 002221

Language: English

Document Type: CA; (Conference Article) Treatment: G; (General Review); T; (Theoretical)

Journal Announcement: 9701W1

Abstract: This paper presents the results of an European co-operation project between the University of Paderborn and the Technological Educational Institute in Iraklion on Crete. Based on neural networks the experiences and results of a 24-hour-online-forecasting system are discussed. The main advantage of this system is the online capability. The system is able to get the load data directly from the data **server** as measurement points or as data base sheets. By training the networks automatically with the load data of the previous days and weeks, the networks are able to adapt better to the seasonal effects of the load and the increasing of the load during the years. The prediction of the loads are given in data sheets and the forecasted and actual load profiles can be visualized. The forecast errors between the prediction and the real data are shown online. (Author abstract) 14 Refs.

Descriptors: Electric power systems; Neural networks; Management information systems; Electric load forecasting; Online systems; Electric



**loads; Database systems; Information use**

34/7,DE/11 (Item 11 from file: 8)  
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04499620

E.I. No: EIP96093335499

Title: Using case-based techniques to enhance constraint satisfaction  
problem solving

Author: Huang, Ye; Miles, Roger

Corporate Source: Univ of the West of England, Bristol, Engl

Source: Applied Artificial Intelligence v 10 n 4 Jul-Aug 1996. p 307-328

Publication Year: 1996

CODEN: AAINEH ISSN: 0883-9514

Language: English

Document Type: JA; (Journal Article) Treatment: A; (Applications); T;  
(Theoretical)

Journal Announcement: 9611W2

Abstract: This article reports on investigations using case-based reasoning to deal with large constraint satisfaction problems associated with the assembly of holiday packages. The system aims to reduce the amount of consistency checking in terms of database queries. The holiday reservation problem is characterized by exhibiting large cardinality in the constraint tables. In order to reduce the **load** on the **database server**, issues concerning the similarity measurement, the quality of the exemplars in the case base, and the conflict ordering problem are addressed. Methods of improving system performance by using case-based techniques have been presented. Empirical results are reported to demonstrate the effectiveness of these methods. Ways of forming a hybrid system using the case-based techniques and a constructive approach to achieve a better overall performance are also outlined. (Author abstract)  
15 Refs.

Descriptors: \*Database systems; Constraint theory; Problem solving;  
Hybrid computers; Large scale systems; Measurements; Set theory;  
Performance

34/7,DE/12 (Item 12 from file: 8)  
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04453938

E.I. No: EIP95042659595

Title: Embedding image query operations in an object-relational database  
management system

Author: Ubell, Michael; Olson, Michael

Corporate Source: Illustra Information Technologies Inc., Oakland, CA,  
USA

Conference Title: Storage and Retrieval for Image and Video Databases III

Conference Location: San Jose, CA, USA

Sponsor: SPIE - Int Soc for Opt Engineering, Bellingham, WA USA

E.I. Conference No.: 22192

Source: Proceedings of SPIE - The International Society for Optical  
Engineering v 2420 1995. Society of Photo-Optical Instrumentation  
Engineers, Bellingham, WA, USA. p 197-203

Publication Year: 1995

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-1767-X

Language: English

Document Type: CA; (Conference Article) Treatment: X; (Experimental); M  
; (Management Aspects)

Journal Announcement: 9609W3

Abstract: Modern computer applications use enormous volumes of rich data like video, still images, and text, as well as more conventional numeric and character data. Managing huge volumes of such diverse data requires a database. Content queries, such as 'find me the color images with red components higher than this threshold,' require that the database system be able to apply the qualification directly. Relational database systems that store images as untyped binary large objects (BLOBS) cannot apply qualifications like this, because the database system does not understand the contents of the BLOB. Object-Relational Database Management Systems (ORDBMS), on the other hand, allow users to extend the set of types and functions known to the database system. Programmers can write code that is dynamically loaded into the database server, and that operates on complex data types such as images. Those functions can be used in standard SQL queries, and the database manager can use new types and function results in indices to support fast queries on complex data. In addition, the query optimizer can be told how expensive the new functions are, so that it chooses an optimal strategy for satisfying complicated queries with many different predicates in their qualifications. 0 Refs.

Descriptors: \*Relational database systems; Management; Query languages; Image processing; Optimization

34/7,DE/13 (Item 13 from file: 8)

DIALOG(R) File 8:EI Compendex(R)

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04186669

E.I. No: EIP95062743084

Title: Combining case based and constraint based techniques in travel reservation systems

Author: Huang, Y.; Miles, R.

Corporate Source: Univ of the West of England, Bristol, Engl

Conference Title: Proceedings of the 11th Conference on Artificial Intelligence for Applications

Conference Location: Los Angeles, CA, USA Conference Date: 19950220-19950223

Sponsor: IEEE

E.I. Conference No.: 43084

Source: Proceedings of the Conference on Artificial Intelligence Applications 1995. IEEE, Piscataway, NJ, USA, 95CH35758. p 46-54

Publication Year: 1995

CODEN: PCAAEF

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications)

Journal Announcement: 9508W2

Abstract: This paper describes a system which uses case based reasoning to deal with large constraint satisfaction problems associated with the assembly of holiday packages. The system aims to reduce the amount of consistency checking in terms of database queries. The holiday reservation problem is characterised by exhibiting large cardinality in the constraint tables. In order to reduce the load on the database server, issues concerning the similarity measurement, the quality of the exemplars in the case base and the conflict ordering problem are

addressed. By using the case based approach with the strategies suggested in this paper, improved performance can be achieved. (Author abstract) 14 Refs.

Descriptors: \*Reservation systems; Knowledge based systems; Constraint theory; Query languages; Performance; Database systems; Systems analysis; Measurements

34/7,DE/14 (Item 14 from file: 8)  
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03916137

E.I. No: EIP94081364226  
Title: Decision support at lands' end - an evolution  
Author: Bustamente, G.G.; Sorenson, K.  
Source: IBM Systems Journal v 33 n 2 1994. p 228-238  
Publication Year: 1994  
CODEN: IBMSA7 ISSN: 0018-8670  
Language: English  
Document Type: JA; (Journal Article) Treatment: A; (Applications); G; (General Review)

Journal Announcement: 9409W5

Abstract: A decision support system with over one billion rows of data has been developed at Lands' End using the IBM DATABASE 2\*\*T\*\*M (DB2\*\*(\*\*R\*\*)) relational database management system. This corporate database is a subset of an information Warehouse\*\*T\*\*M framework and functions as both a decision support system **server** and an application enabler. The corporate database uses operational data gathered from order processing and customer mailing systems. Weekly processes reformat these real-time data for **loading** into the corporate **database**. This paper discusses some of the business requirements that guided the development of the corporate database, and also describes the database design process, tool selection, and implementation experiences. (Author abstract) 7 Refs.

Descriptors: \*Decision support systems; Relational database systems; Administrative data processing; Modernization; Real time systems; Systems analysis; Magnetic tape storage

34/7,DE/15 (Item 15 from file: 8)  
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03036948

E.I. Monthly No: EIM9103-010864  
Title: Initial experience with a radiology imaging network to new born and intensive care units.  
Author: Witt, Robert M.; Cohen, Mervyn D.; Appledorn, C. Robert  
Corporate Source: Indiana Univ Medical Cent, Indianapolis, IN, USA  
Conference Title: Medical Imaging IV: PACS System Design and Evaluation  
Conference Location: Newport Beach, CA, USA Conference Date: 19900206  
Sponsor: SPIE; American Assoc of Physicists in Medicine; American Coll of Radiology; FDA, Cent for Devices & Radiological Health; Natl Electrical Manufacturers Assoc, Diagnostic Imaging & Therapy Systems  
E.I. Conference No.: 13852

Source: Proceedings of SPIE - The International Society for Optical Engineering v 1234 pt 1. Publ by Int Soc for Optical Engineering,

Bellingham, WA, USA. p 82-85

Publication Year: 1990

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-0278-8

Language: English

Document Type: PA; (Conference Paper) Treatment: A; (Applications); G; (General Review); X; (Experimental)

Journal Announcement: 9103

Abstract: A digital image network has been installed in the James Whitcomb Riley Hospital for Children on the Indiana University Medical Center to create a limited all digital imaging system. The total system is composed of commercial components, Philips/AT&T CommView system, and connects an existing Philips Computed Radiology (PCR) system to viewing workstations located in the intensive care unit and the new born nursery. The purpose and design of the system is to input the portable chest images from the PCR system, and to display these images at the remote workstations on high resolution monitors for direct viewing by referring clinicians, thus eliminating some of their visits to the radiology department three floors away. The design criteria includes the ability to control all image management functions on the remote workstations to relieve the clinicians from any image management tasks except for recalling patient images. The principal components of the system are the Philips PCR system, the acquisition module (AM), and the PCR interface to the data management module (DMM). Connected to the DMM are a display workstation (DW), a optical disk drive, and a fiber optic to ethernet gateway. The ethernet link is the network connection to the two results viewing stations (RVS) located approximately 100 meters from the DMM. The DMM acts as an image file **server** and image archive device. The DMM manages the image **database** and can **load** images to both the DW's and the two RVS's. The system has met the initial design specifications and can successfully capture images from the PCR and direct them to the RVS's. Additional studies are beginning to determine the optimal image management procedures such as when to archive and purge images from the DMM. (Author abstract)

Descriptors: \*RADIOGRAPHY--\*Diagnostic Applications; BIOMEDICAL ENGINEERING--Pediatrics; COMPUTER WORKSTATIONS; HOSPITALS--Intensive Care Units; DATABASE SYSTEMS--Medical Applications; IMAGING TECHNIQUES--Medical Applications

34/7,DE/16 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01831909 AADAAI3012515

Safety-checking of machine code

Author: Xu, Zhichen

Degree: Ph.D.

Year: 2001

Corporate Source/Institution: The University of Wisconsin - Madison (0262)

Supervisors: Barton Miller; Thomas Reps

Source: VOLUME 62/04-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 1947. 148 PAGES

Descriptors: COMPUTER SCIENCE

ISBN: 0-493-23053-X

Importing and executing untrusted foreign code has become an everyday occurrence: Web **servers** download plug-ins and applets;

**databases** load type-specific extensions; and operating systems load customized policies and performance measurement code. Certification of the safety of the untrusted code is crucial in these domains.

I have developed new methods to determine statically whether it is safe for untrusted machine code to be loaded into a trusted host system. My safety-checking technique operates directly on the untrusted machine-code program, requiring only that the initial inputs to the untrusted program be annotated with typestate information and linear constraints. This approach opens up the possibility of being able to certify code produced by any compiler from any source language. It eliminates the dependence of safety on the correctness of the compiler because the final product of the compiler is checked. It leads to the decoupling of the safety policy from the language in which the untrusted code is written, and consequently, makes it possible for safety checking to be performed with respect to an extensible set of safety properties that are specified on the host side.

I have implemented a prototype safety checker for SPARC machine-language programs, and applied the safety checker to examples (ranging from code that contains just a few branches, to code that contains nested loops, and to code that contains function and method calls). The safety checker was able to mechanically synthesize the loop invariants and check these examples in times ranging from less than a second to dozens of seconds.

34/7,DE/17 (Item 2 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01423703 AADAAI9522095  
DATABASE SUPPORT FOR ELECTRONIC CAD APPLICATION: PERFORMANCE AND  
ARCHITECTURE (CLIENT **SERVER**)  
Author: CHU, SHEAUYN IRIS  
Degree: PH.D.  
Year: 1995  
Corporate Source/Institution: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
(0090)  
Adviser: MARIANNE WINSLETT ~  
Source: VOLUME 56/03-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 1532. 105 PAGES  
Descriptors: COMPUTER SCIENCE

This research addresses the problems in obtaining efficient database support with good functionality for electronic CAD applications. We believe that performance is a deciding factor in the acceptance of DBMSes as a replacement of file systems or home-grown databases in ECAD tools and that many DBMS design and implementation choices can have a major impact on the performance of the resulting system.

Fast loads, fast stores, and fast in-memory references are all important performance considerations. The first part of this thesis assessed empirically the impact of different architectural features on the performance of database systems by running benchmarking experiments on CAD tools using various DBMSes as the underlying storage system. In these experiments, the DBMS was used to retrieve and store data only, representing a loosely-integration between the DBMS and the CAD tool. Results of these experiments indicate that architectural choices such as access methods, clustering, transfer granularity, process architecture, application overhead all have great impact on **database** performance for **load** and store operations. In addition, the tightly-coupled OOI

benchmark was ported to several commercial DBMSes to investigate tightly-coupled interactions between the DBMS and the CAD tools. The kind of client-**server** architecture was found to have the most significant impact.

A detailed study of different client-**server** architecture choices shows that a 'page-to-page' architecture will permit an implementation where most routine reference following (i.e., where the referenced data is in memory and appropriately locked) is handled by virtual memory hardware to eliminate expensive software overhead. Page-to-page systems, however, have a number of limitations such as unacceptable low concurrency for high-contention data pages and difficulties in supporting fine-grained authorization. The second part of this research focuses on how to improve the functionality of page-to-page **server**. We showed how to use hardware assisted locking of minipages (subdivisions of a page), which is already available on many well-known platforms, to overcome these limitations. Simulation results show that the minipage approach performs essentially as well as the standard page-to-page **server** when contention for data is light, while offering the ability to do fine-grained authorization. In addition, the minipage approach performs much better than the standard page-to-page **server** when there is much contention for data between clients.

34/7,DE/18 (Item 3 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01386016 AADMM88356  
A PROTOCOL FOR DISTRIBUTED UNIX SHELLS  
Author: BREITKREUTZ, TIMOTHY WAYNE  
Degree: M.SC.  
Year: 1993  
Corporate Source/Institution: UNIVERSITY OF ALBERTA (CANADA) (0351)  
Adviser: T. A. MARSLAND  
Source: VOLUME 33/01 of MASTERS ABSTRACTS.  
PAGE 210. 94 PAGES  
Descriptors: COMPUTER SCIENCE  
ISBN: 0-315-88356-1

A protocol for shell programmes to harness distributed UNIX workstation computing resources on a network is proposed and evaluated. The protocol allows a shell, graphical desktop, or scripting language to execute its subcommands on other computers by contacting them as **servers**. In a decentralised fashion, **servers** only respond to requests that they are capable of fulfilling, preventing the need for a centralised **database**, load-balancing system, or capability service. Faster and more available **servers** inherently respond more quickly to service requests, improving the performance of the distributed system. Furthermore, a distributed shell allows users to ignore which system can run different commands, since only **servers** capable of executing a command by a given name will respond. The proposed protocol fills a gap between existing remote execution protocols, which are limited in their functionality, and fully distributed programming paradigms. The original UNIX philosophy of using a shell programme to piece together small programmes, thereby gaining flexibility and performance, is applied to the distributed environment.

34/7,DE/19 (Item 1 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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3502962

Resource sharing digital libraries: a case study of Taiwan's InfoSpring Digital Library Project.

Author(s): Ke, Hao-Ren (claven@cc.nctu.edu.tw); Chang, Ruei-Chuan  
Corporate Source: National Chiao Tung University, Hsinchu, Taiwan ;  
National Chiao Tung University, Hsinchu, Taiwan

Library Collections, Acquisitions, & Technical Services vol. 24, no. 3  
, pages 371-377

Publication Date: Fall 2000

ISSN: 1464-9055

Language: English

Document Type: Journal Article

Record Type: Abstract

Journal Announcement: 3507

The InfoSpring Digital Library Project at National Chaio Tung University is designed to establish mirror sites in Taiwan for well-known reference databases and full-text electronic journals. The role of NCTU in this project is to provide the hardware (including **servers** and storage space) and network infrastructure, system maintenance, and data update. By means of resource sharing, universities and industries in Taiwan can access the **databases loaded** in the InfoSpring Digital Library under certain subscription agreements. Realizing the importance of resource sharing, libraries in Taiwan have organized a consortium to decide which databases to be hosted in Taiwan and to negotiate competitive prices with information providers. Outlines the motivation, current status, experiences, and future directions of the InfoSpring Project, and introduces the Taiwanese library consortium which it serves.

Descriptors: Library networks; Consortia; Resource sharing; Models

34/7,DE/20 (Item 2 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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3401856

The new database aggregators.

Author(s): Garman, Nancy

Online vol. 23, no. 2, pages 6

Publication Date: March 1999

ISSN: 0146-5422

Language: English

Document Type: Journal Article

Record Type: Abstract

Journal Announcement: 3404

No longer is collecting, formatting and **loading databases**, designing search software and interfaces, and offering access and links the sole province of major online services. Given the power and capabilities of Web **servers** and software, librarians themselves have become aggregators of databases and information, and they often beat the online services at their own game by offering library customers better and more specialized services. Overviews the historical role of academic libraries

as aggregators of electronic databases and creators of custom interfaces and specialized collections for their customer base. Points out that the advent of the Internet forced librarians to acquire all types of new Web-based skills by building customized Websites of resources for their patrons. Concludes that librarians are now building specialized, in-house, online services on intranets, and delivering more customized services and sources to their clients than a supermarket service ever dreamed possible.

Descriptors: Academic libraries; Internet; Library services; Online systems

34/7,DE/21 (Item 3 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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3202342

Providing database services in a nationwide research organization--coexistence of traditional information services and a modern CD-ROM/online hybrid solution.

Author(s): Bowman, B F

Corporate Source: Max-Planck Institute of Biochemistry

Publication Date: 1996

Pages: 231-235

Conference Title: Proceedings of the 20th International Online Information Meeting

Conference Location: London

Conference Date: December 1996

Publisher: Learned Information, Ltd.

Language: English

Place of Publication: United Kingdom

Document Type: Conference Paper

Record Type: Abstract

Journal Announcement: 3200

For the past two decades, the central Information Retrieval Services in the Max Planck Society have been providing database searches for scientists in Max Planck Institutes and Research Groups throughout Germany. As a supplement to traditional search services offered by professional intermediaries, the organization has recently fostered the introduction of a new information system that can be accessed directly from all sites. Ovid Technologies were chosen as partner for this project. Their common user interfaces offers database-specific search tools for the expert as well as for the novice user. Further advantages are the use of the TCP/IP protocol allowing immediate access from a number of different computer platforms, the client/**server** architecture and the adherence to the Z39.50 standard, thus providing interconnectivity with other library **servers**. The possibility of using the Ovid Local **Loader** to install internal **databases** under the same user interface as external databases was of particular interest to the Institutes. The advantages of a CD-ROM interface in combination with the performance of an online system ("CD-ROM/online hybrid") has made this new service very popular among the scientists. Of critical importance for the quality and success of the project was the active participation of experienced information specialists during the planning, testing, installation and final production stages.

Descriptors: Biochemistry; CD-ROM (Compact Disk-Read Only Memory); Client **server** systems; Computer architectures



34/7,DE/22 (Item 4 from file: 202)  
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2902673

Extending retrieval strategies to networked environments: old ways, new ways, and a critical look at WAIS.  
Author(s): Marchionini, G; Hill, L  
Corporate Source: Univ. of Maryland, College Park, MD  
Journal of the American Society for Information Science vol. 45, no. 8  
, pages 561-564  
Publication Date: Sep 1994  
ISSN: 0002-8231  
Language: English  
Document Type: Journal Article  
Record Type: Abstract  
Journal Announcement: 2900

This article discusses a comparative investigation, which was conducted for the WAIS system and a Boolean-based information retrieval system in networked environments. This brief communication reports preliminary results from this study and makes suggestions for developers, evaluators, and users. WAIS, which is the name of suite of programs using the client/**server** architecture and is based on the NISO Z39.50 information retrieval protocol, allows searchers using a variety of interface "clients" to formulate queries which are translated into appropriate formats for particular "**servers**" that contain the bibliographic or primary information. For the study reported, three years of NASA's STI **Database** was loaded at NASA using a commercial WAIS **server** from WAIS, Inc. and a WAIS Macintosh client was used to conduct searches for four topics identified by graduate students in aerospace engineering at the University of Maryland. Limitations of the Boolean-based retrieval systems (BBS), which have been enhanced to provide capabilities such as field limits, proximity qualification, and term weighting in the form of major or minor index terms, are discussed. This study also illustrated several problems with the WAIS system, along with the potentials for WAIS.

Descriptors: Boolean functions; Client **server** systems; Computer networks; Information retrieval

34/7,DE/23 (Item 5 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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2902059

On the horizon for academic libraries.  
Author(s): Hattery, M  
Corporate Source: EDITOR  
Information Retrieval & Library Automation vol. 30, no. 1, pages 1-3  
Publication Date: Jun 1994  
ISSN: 0020-0220  
Language: English  
Document Type: Journal Article  
Record Type: Abstract  
Journal Announcement: 2900

The article describes NOTIS Horizon, a UNIX-based, client/**server** information management system designed for academic libraries. It reaches beyond the campus with Z39.50-compliance for access to remote databases and TCP/IP for the Internet. The UNIX base takes advantage of open systems protocols to allow libraries to more easily **load databases** locally. Image and full-text multimedia databases are supported as well as document delivery of library materials, full-text documents, and images. It is designed to adapt to policy changes: all system changes can be done locally without vendor intervention. It is an integrated system that includes OPAC, Cataloging and Authority Control, Circulation, Acquisitions and Fund Accounting, Serials Control, and Reporting.

Descriptors: Academic libraries; Acquisitions; Authority files; Cataloging

34/7,DE/24 (Item 6 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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2800384  
Rocky Mountain high-tech: LITA's Denver conference.  
Author(s): Flagg, G  
American Libraries vol. 23, no. 10, pages 836-844  
Publication Date: Nov 1992  
ISSN: 0002-9769  
Language: English  
Document Type: Journal Article  
Record Type: Abstract  
Journal Announcement: 2800

This paper reports on the ALA's Library and Information Technology Association meeting in 1992, focusing on virtual reality, CD-ROMs, cataloging workstations, and remote access. Workshops on PC troubleshooting, desktop publishing design, and other areas are also reported on. Trends in providing electronic access to information, including local **loading of databases** in PACs, community files listing local clubs, graphics, imaging, multimedia, networking, and clinet/**server** architecture are also discussed. The importance of Internet is stressed.

Descriptors: Access; ALA (American library association); Architecture;  
CD-ROM (Compact disk-read only memory)

34/7,DE/25 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
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7891069 INSPEC Abstract Number: C2004-04-7820-015  
Title: Cooperative development environment of sign language animation system using humanoid model  
Author(s): Yuizono, T.; Hara, K.; Nakayama, S.  
Author Affiliation: Dept. of Inf. & Comput. Sci., Kagoshima Univ., Japan  
Conference Title: Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002 Part vol.2 p.1038-42 vol.2  
Editor(s): Damiani, E.; Howlett, R.J.; Jain, L.C.; Ichalkaranje, N.  
Publisher: IOS Press, Amsterdam, Netherlands  
Publication Date: 2002 Country of Publication: Netherlands 2

vol.(xxv+xx+1409) pp.

ISBN: 4 274 90535 7      Material Identity Number: XX-2003-00042

Conference Title: Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies. KES 2002

Conference Date: 16-18 Sept. 2002      Conference Location: Podere d'Ombriano, Crema, Italy

Language: English      Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: We have developed a sign language animation system made by cooperative group. The system presents the animation of a 3D avatar referred to a humanoid model. The system has been developed as a multilayered system, which has middle **server** between animation database **server** and 3D graphics client system. The two client systems developed here are both Java3D application and Web based VRML client. Both client systems support the same humanoid model and can show a sign language shared with the same animation data. The **database** aims at load balancer to make an avatar animation from a sign language word. Our estimation of this system shows that 3D avatar animation is better than both our early avatar animation system and printed document. (8 Refs)

Subfile: C

Descriptors: application program interfaces; client-**server** systems; computer animation; groupware; Internet; Java; linguistics; natural languages; virtual reality languages

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34/7,DE/26      (Item 2 from file: 2)

DIALOG(R) File 2:INSPEC

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7853678      INSPEC Abstract Number: C2004-03-7840-012

Title: Preliminary performance evaluation of an agent-based geospatial data conflation system

Author(s): Rahimi, S.; Bjursell, J.; Ali, D.; cobb, M.; Paprzycki, M.

Author Affiliation: Dept. of Comput. Sci., Southern Illinois Univ., Carbondale, IL, USA

Conference Title: Proceedings IEEE/WIC International Conference on Intelligent Agent Technology (IAT 2003)      p.550-3

Editor(s): Liu, J.; Faltings, B.; Zhong, N.; Lu, R.; Nishida, T.

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2003      Country of Publication: USA      xx+635 pp.

ISBN: 0 7695 1931 8      Material Identity Number: XX-2003-02092

U.S. Copyright Clearance Center Code: 0-7695-1931-8/03/\$17.00

Conference Title: 2003 IEEE/WIC International Conference on Intelligent Agent Technology

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Computational Intelligence (TCCI); Web Intelligence Consortium (WIC)

Conference Date: 13-16 Oct. 2003      Conference Location: Halifax, NS, Canada

Language: English      Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: A rapid growth of available geospatial data requires development of systems capable of autonomous data retrieval, integration and validation. Mobile agent technology may provide a suitable framework for developing such systems since this technology can deal, in a natural way, with the distributed heterogeneous nature of the data. We evaluate our novel multi-agent architecture for geospatial data integration and compare its performance with a client/**server** and a single-agent architecture.

We analyze the performance alteration for various numbers of participating nodes, amount of **database** accesses, processing **loads**, and network loads. (2 Refs)

Subfile: C

Descriptors: data handling; geographic information systems; information retrieval; multi-agent systems; performance evaluation; visual databases

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DIALOG(R)File 2:INSPEC

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7395801 INSPEC Abstract Number: C2002-11-6150N-025

Title: An architecture for dynamic discovery service

Author(s): Mandayam, J.; Hariri, S.

Author Affiliation: Dept. of Electr. & Comput. Eng., Arizona Univ., Tucson, AZ, USA

Conference Title: Proceedings of the ISCA 3rd International Conference Information Reuse and Integration p.68-73

Editor(s): Smari, W.W.

Publisher: Int. Soc. Comput. & their Applications - ISCA, Cary, NC, USA

Publication Date: 2001 Country of Publication: USA iii+153 pp.

ISBN: 1 880843 41 2 Material Identity Number: XX-2002-01766

Conference Title: Proceedings of the ISCA 3rd International Conference Information Reuse and Integration

Conference Sponsor: Int. Soc. Comput. & their Applications - ISCA

Conference Date: 27-29 Nov. 2001 Conference Location: Las Vegas, NV, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The widespread deployment of inexpensive communications technology, computational resources in the networking infrastructure, and network-enabled end-devices pose an interesting problem: how to locate a particular network service or a device out of millions of accessible services and devices. Traditionally the services are registered in a centralized database that can grow exponentially in size and thus makes this approach inefficient as the **load** on the **database** and network traffic increases as more clients access the service. In addition, the centralized database becomes a single point of failure and it cannot react to the dynamic changes in service attributes and client parameters. In this paper, we present an architecture based on Java/Jini technology to achieve dynamic registration and discovery of network services. The main modules of our architecture include Lookup Service, Service Manager, Attribute Repository, and Access Control Manager. We have developed templates to register the network services and their attributes. We have implemented a proof of concept prototype system based on our architecture and discuss few examples on how to register and dynamically discover network services. (9 Refs)

Subfile: C

Descriptors: client-server systems; information services; Internet; Java; naming services; network operating systems; supervisory programs

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34/7,DE/28 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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7344437 INSPEC Abstract Number: C2002-09-7210N-040

Title: Load testing of Web sites

Author(s): Menasce, D.A.

Author Affiliation: George Mason Univ., Fairfax, VA, USA

Journal: IEEE Internet Computing vol.6, no.4 p.70-4

Publisher: IEEE,

Publication Date: July-Aug. 2002 Country of Publication: USA

CODEN: IICOFX ISSN: 1089-7801

SICI: 1089-7801(200207/08)6:4L:70:LTS;1-K

Material Identity Number: F277-2002-004

U.S. Copyright Clearance Center Code: 1089-7801/02/\$17.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: Developers typically measure a Web application's quality of service in terms of response time, throughput, and availability. Poor QoS translates into frustrated customers, which can lead to lost business opportunities. At the same time, company expenditures on a Web site's IT infrastructure are a function of the site's expected traffic. Ideally, you want to spend enough, and no more, allocating resources where they will generate the most benefit. For example, you should not upgrade your Web **servers** if customers experience most delays in the **database server** or **load balancer**. Thus, to maximize your ROI, you must determine when and how to upgrade IT infrastructure. One way to assess IT infrastructure performance is through load testing, which lets you assess how your Web site supports its expected workload by running a specified set of scripts that emulate customer behavior at different load levels. I describe the QoS factors load testing addresses, how to conduct load testing, and how it addresses business needs at several requirement levels. (5 Refs)

Subfile: C

Descriptors: information resources; Internet; program testing; quality of service

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34/7,DE/29 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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7314849 INSPEC Abstract Number: C2002-08-6160B-007

Title: Improvement of global transaction processing performance using operation unit on distributed databases

Author(s): Joong In Lee; Sang Kyun Cha; Young Kuk Kim; Seong Il Jin

Author Affiliation: Dept. of Comput. Inf. Process., Daejeon Health Sci. Coll., South Korea

Conference Title: Proceedings of the IASTED International Conference Applied Informatics International Symposium on Software Engineering, Databases, and Applications p.412-17

Editor(s): Hamza, M.H.

Publisher: ACTA Press, Anaheim, CA, USA

Publication Date: 2001 Country of Publication: USA iv+526 pp.

ISBN: 0 88986 322 9 Material Identity Number: XX-2002-00971

Conference Title: Proceedings of the IASTED International Conference Applied Informatics. International Symposium on Software Engineering, Databases, and Applications

Conference Sponsor: IASTED

Conference Date: 18-21 Feb. 2002 Conference Location: Innsbruck,

## Austria

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: When a user requests queries to a distributed database, the global transaction manager generates as many internal operations as the number of hosts participating in the distributed **database**, which causes increased **load** to the **database**, and eventually the performance decreases. The key to reducing the load and increasing the performance is in the design of **server** architecture. We propose a method for reducing the **server's** load. We define operation units as objects that have the same functions of the specified application domains. One predefined operation unit is selected without generating lots of internal transactions by a user's query. This operation unit is generated by an internal transaction generator. We also propose a transaction communicator architecture that is able to process a global transaction internally. In addition, we introduce a transmission algorithm transferring generated transactions to related sites efficiently in order to improve the performance of global transaction processing. (7 Refs)

Subfile: C

Descriptors: distributed databases; file **servers**; query processing; transaction processing

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34/7,DE/30 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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7083231 INSPEC Abstract Number: C2001-12-6150N-093

Title: Instant recall with XML data caching

Author(s): Amos, T.

Journal: WEB Techniques vol.6, no.9 p.39-41

Publisher: CMP Media Inc,

Publication Date: Sept. 2001 Country of Publication: USA

CODEN: WETEFA ISSN: 1086-556X

SICI: 1086-556X(200109)6:9L:39:IRWD;1-6

Material Identity Number: F184-2001-009

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: When a Web application loses momentum as it gains more users, customer complaints aren't far behind. That's when Web developers look for ways to optimize application performance. But occasionally, even a Web application that has a solid design from the outset is burdened by performance problems. Because the typical three-tier Web application design employs one or more Web **servers** and a single data store, one all-too-common malady is slow response to database requests. By caching database information on the Web **server** or application **server**, you can relieve the database **server** of some of its repetitive work. One way to do this is to create an in-memory database on the Web **server** that maintains a copy of static, read-only information drawn from the database. Not only does this enhance performance by reducing the **database load**, but you also gain greater flexibility in how your application can use the data. For example, the application could then perform its own sorting, key lookups, and operations on data subsets. This isn't as hard as it may sound. You can find a prebuilt solution in most developers' toolkits: a good XML parser coupled with an XSLT processor delivers everything you need, and more. (0 Refs)

Subfile: C

Descriptors: cache storage; file **servers**; grammars; hypermedia  
markup languages; Internet  
Copyright 2001, IEE

34/7,DE/31 (Item 7 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6830372 INSPEC Abstract Number: B2001-03-6210C-016, C2001-03-6160B-004  
Title: Evolutionary algorithm performance profiles on the adaptive distributed database management problem  
Author(s): Oates, M.J.  
Journal: BT Technology Journal vol.18, no.4 p.66-77  
Publisher: British Telecommunications plc,  
Publication Date: Oct. 2000 Country of Publication: UK  
CODEN: BTJUEH ISSN: 1358-3948  
SICI: 1358-3948(200010)18:4L:66:EAPP;1-K  
Material Identity Number: 0923-2000-004  
Language: English Document Type: Journal Paper (JP)  
Treatment: Applications (A); Practical (P); Theoretical (T); Experimental (X)

Abstract: Evolutionary algorithms have been shown to be effective in providing configuration optimisation to dynamic **load** balancing in distributed **database** systems and Web **servers** . This paper explores the tuning parameter performance profile of such techniques over a variety of problems, including the adaptive distributed database management problem (ADDMP), focusing on a range of interesting and important features. The ability of the evolutionary search process to reliably find good solutions to a dynamic problem in a minimal and consistent runtime is of paramount importance when considering their application to real-time industrial control problems. This paper demonstrates the existence of certain optimal parameter values, particularly for the rate of applied mutation, which are shown to produce consistently good problem solutions in a low number of evaluations with a minimum standard deviation. (27 Refs)

Subfile: B C

Descriptors: adaptive systems; computer network management; distributed databases; evolutionary computation; file **servers**; industrial control ; Internet; performance evaluation; quality of service  
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34/7,DE/32 (Item 8 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6751227 INSPEC Abstract Number: C2000-12-7210L-013  
Title: Resource sharing digital libraries: a case study of Taiwan's InfoSpring Digital Library Project  
Author(s): Hao-Ren Ke; Ruei-Chuan Chang  
Author Affiliation: Nat. Chiao Tung Univ., Hsinchu, Taiwan  
Journal: Library Collections, Acquisitions, & Technical Services  
vol.24, no.3 p.371-7  
Publisher: Elsevier,  
Publication Date: Fall 2000 Country of Publication: UK  
CODEN: LAPTDK ISSN: 1464-9055  
SICI: 1464-9055(200023)24:3L:371:RSDL;1-U  
Material Identity Number: H298-2000-004

U.S. Copyright Clearance Center Code: 1464-9055/2000/\$20.00

Document Number: S1464-9055(00)00136-6

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The InfoSpring Digital Library Project conducted by National Chiao Tung University (NCTU) is a project to establish mirror sites in Taiwan for well-known reference databases and full-text electronic journals. The role of NCTU in this project is to provide the hardware (including **servers** and storage space) and network infrastructure, system maintenance and data update. By means of resource sharing, universities and industries in Taiwan can access the **databases loaded** in the InfoSpring Digital Library under certain subscription agreements. Realizing the importance of resource sharing, libraries in Taiwan have organized a consortium to decide which databases to be hosted in Taiwan and negotiate competitive prices with information providers. This paper presents the motivation, current status, experiences, and future directions of the InfoSpring Project and introduces the Taiwanese library consortium which it services. (4 Refs)

Subfile: C

Descriptors: digital libraries; electronic publishing; full-text databases; interlibrary loan; research libraries

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34/7,DE/33 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

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6708324 INSPEC Abstract Number: B2000-10-6430G-025, C2000-10-6160M-018

Title: Resource prediction and admission control for interactive video

Author(s): Aberer, K.; Hollfelder, S.

Author Affiliation: GMD, Nat. Res. Center for Inf. Technol., Darmstadt, Germany

Conference Title: Database Semantics. Semantic Issues in Multimedia Systems. IFIP TC2/WG2.6 Eighth Working Conference on Database Semantics (DS-8) p.27-46

Editor(s): Meersman, R.; Tari, Z.; Stevens, S.

Publisher: Kluwer Academic Publishers, Norwell, MA, USA

Publication Date: 1999 Country of Publication: USA xi+456 pp.

ISBN: 0 7923 8405 9 Material Identity Number: XX-1999-00827

Conference Title: Proceedings of 8th Working Conference on Database Semantics

Conference Date: 4-8 Jan. 1999 Conference Location: Rotorua, New Zealand

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Highly interactive multimedia applications, like browsing in video **databases**, generate strongly varying **loads** on the media **server** during the presentation of media data. Existing admission control approaches for limiting the number of concurrent users and thus guaranteeing acceptable service quality are only suited for applications with uniform load characteristics like video-on-demand. We propose a session-oriented approach to admission control that is based on the stochastic model of continuous-time Markov chains, which allows to describe the different presentation states occurring in the interactive access to the multimedia database. The model is derived from semantic information on the forthcoming browsing session. In particular, it considers the relevance of the videos to the user. In this way, a more



precise prediction on resource usage can be given for achieving the two goals of quality of service (QoS) and good **server** utilization. The admission control mechanism is part of a multimedia database architecture for supporting efficient browsing in large video collections. (26 Refs)

Subfile: B C

Descriptors: interactive video; Markov processes; multimedia communication; multimedia databases; multimedia **servers**; quality of service; resource allocation; telecommunication congestion control; video databases; video **servers**; visual communication

Copyright 2000, IEE

34/7,DE/34 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6643591 INSPEC Abstract Number: C2000-08-6150N-074

Title: Distributed processing system by History for load balancing

Author(s): Yasumatsu, K.; Takeda, Y.; Murakoshi, H.; Funakubo, N.

Author Affiliation: Dept. of Electr. Syst. Eng., Tokyo Metropolitan Inst. of Technol., Japan

Conference Title: Control in Natural Disasters (CND'98) Proceedings volume from the IFAC Workshop p.33-7

Editor(s): Sano, A.; Ishii, R.

Publisher: Elsevier Sci, Kidlington, UK

Publication Date: 1999 Country of Publication: UK vi+165 pp.

ISBN: 0 08 043240 9 Material Identity Number: XX-1999-03029

Conference Title: Proceedings of Control in Natural Disasters Workshop

Conference Sponsor: IFAC; Soc. Instrum. & Control

Conference Date: 21-22 Sept. 1998 Conference Location: Tokyo, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: A method based on History, a database, is proposed for balancing the computing load over a distributed processing system. Communication costs are considered. History is a **database** of **load** states learned using a self-organization feature map. Capsuled objects of a class described in an object-oriented programming language are distributed. The remote class controller (RCC) and remote class (RC) are generated from the source class. RC are sent to the **servers** suggested by History, and, by linking RCC, a main program can communicate with RC. As a result, the load was balanced and the communication cost in execution became low. (5 Refs)

Subfile: C

Descriptors: distributed processing; object-oriented databases; object-oriented programming; resource allocation; self-organising feature maps

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? ? t s73/ti/1-41

73/TI/1 (Item 1 from file: 8)

DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Online multicast routing with bandwidth guarantees: A new approach using multicast **network** flow

73/TI/2 (Item 2 from file: 8)

DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Jena: A semantic web toolkit

73/TI/3 (Item 3 from file: 8)  
DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Integration of content based image retrieval system with PACS

73/TI/4 (Item 4 from file: 8)  
DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Microcell automatic propagation measuring system combined with  
**management database** - MAPS-MDB

73/TI/5 (Item 5 from file: 8)  
DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Some experience using OODB in the interopèration of heterogeneous  
genome **database** systems

73/TI/6 (Item 6 from file: 8)  
DIALOG(R)File 8:(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Distributed real-time **database** for heterogeneous computer  
control systems

73/TI/7 (Item 1 from file: 35)  
DIALOG(R)File 35:(c) 2004 ProQuest Info&Learning. All rts. reserv.

A new bioinformatic resource: A heterotrimeric G-protein database (hGPDB)

73/TI/8 (Item 2 from file: 35)  
DIALOG(R)File 35:(c) 2004 ProQuest Info&Learning. All rts. reserv.

INFORMATION MANAGEMENT IN NEXT GENERATION CIM SYSTEMS (COMPUTER INTEGRATED  
MANUFACTURING, RELATIONAL **DATABASES**)

73/TI/9 (Item 3 from file: 35)  
DIALOG(R)File 35:(c) 2004 ProQuest Info&Learning. All rts. reserv.

NEURAL **NETWORK** MODELING AND OPTIMIZATION OF ZEOLITIC AUTOMOBILE  
EXHAUST CATALYSTS

73/TI/10 (Item 1 from file: 202)  
DIALOG(R)File 202:(c) 2004 EBSCO Publishing. All rts. reserv.

Computerized **database** system for an effective usage of the National  
Infectious Disease Surveillance Scheme.

73/TI/11 (Item 2 from file: 202)  
DIALOG(R)File 202:(c) 2004 EBSCO Publishing. All rts. reserv.

Query language execution on heterogeneous **database servers**  
using a bind-file bridge between application and **database** languages.

73/TI/12 (Item 1 from file: 65)  
DIALOG(R)File 65:(c) 2004 BLDSC all rts. reserv. All rts. reserv.

E.Q.U.U.S.-A client-**server** laboratory **management database**  
using spreadsheet clients  
CONFERENCE: Genome mapping and sequencing

73/TI/13 (Item 1 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Information retrieval Z39.50 for protocol specification

73/TI/14 (Item 2 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: A CORBA persistent state service based on a UML model to a  
relational **database** mapping

73/TI/15 (Item 3 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Application of middleware in the three tier **client/**  
**server** database design methodology

73/TI/16 (Item 4 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Process model for round-trip engineering with relational database

73/TI/17 (Item 5 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Access to databases with Internet network-Internet database  
connection mechanism

73/TI/18 (Item 6 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Database caching over the air-storage

73/TI/19 (Item 7 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Client-based transactions across database boundaries

73/TI/20 (Item 8 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Historical pavement **management database** feasibility  
study

73/TI/21 (Item 9 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: The new space and Earth science information systems at NASA's  
archive

73/TI/22 (Item 10 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: KIWI: knowledge-based user-friendly system for the utilization of  
information bases

73/TI/23 (Item 11 from file: 2)  
DIALOG(R)File 2:(c) 2004 Institution of Electrical Engineers. All rts.  
reserv.

Title: Fast access to archival information stored on optical memory discs

73/TI/24 (Item 1 from file: 94)  
DIALOG(R)File 94:(c)2004 Japan Science and Tech Corp(JST). All rts.  
reserv.

An Implementation of **Network Management Database**.

73/TI/25 (Item 2 from file: 94)  
DIALOG(R)File 94:(c)2004 Japan Science and Tech Corp(JST). All rts.  
reserv.

Toward construction of a simple patent **database** covering the precious  
metal field.

73/TI/26 (Item 1 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrghrt All Rights Res. All rts.  
reserv.

Federal Implementation Guideline for Electronic Data Interchange: ASC X12  
003070 Transaction Set 242 Data Status Tracking. Implementation Convention  
(Special pub)

73/TI/27 (Item 2 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Student Research Projects, 1993  
(Technical note)

73/TI/28 (Item 3 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Knowledge-Based System Analysis and Control Defense Switched  
**Network** Task Areas  
(Annual rept. 1 Oct 87-30 Sep 88)

73/TI/29 (Item 4 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Multiple Channel Fast Orthogonalization **Network**  
(Patent)

73/TI/30 (Item 5 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Management Requirements of the 3COM Ethernet Local Area **Network**  
(Master's thesi)

73/TI/31 (Item 6 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Radial Basis Functions, Multi-Variable Functional Interpolation and  
Adaptive **Networks**  
(Memorandum rept)

73/TI/32 (Item 7 from file: 6)  
DIALOG(R)File 6:(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts.  
reserv.

Konvergenzuntersuchung fuer einen Algorithmus zur Kompensation von Echos  
mit Frequenzversatz in Fernsprechnetzen. (Convergence Investigation for An  
Algorithm for The Compensation of Echoes with Frequency Displacement  
Occurring in Telecommunication **Networks**)

73/TI/33 (Item 1 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: Immunological tolerance loss vs. erythrocyte self antigens and  
cytokine **network** dysregulation in autoimmune hemolytic anaemia

73/TI/34 (Item 2 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: Genome-based peptide fingerprint scanning

73/TI/35 (Item 3 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: Cooperation in R&D in the pharmaceutical industry - The  
**network** as an organizational innovation governing technological  
innovation

73/TI/36 (Item 4 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: MULTIMEDIA **DATABASES**

73/TI/37 (Item 5 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: PHENODB - AN INTEGRATED CLIENT/**SERVER DATABASE** FOR  
LINKAGE AND POPULATION-GENETICS

73/TI/38 (Item 6 from file: 34)  
DIALOG(R)File 34:(c) 2004 Inst for Sci Info. All rts. reserv.

Title: DNA WORKBENCH - A **DATABASE** PACKAGE TO **MANAGE** REGIONAL  
PHYSICAL MAPPING

73/TI/39 (Item 1 from file: 95)  
DIALOG(R)File 95:(c) 2004 FIZ TECHNIK. All rts. reserv.

File allocation designs for distributed multimedia information  
**networks**

73/TI/40 (Item 2 from file: 95)  
DIALOG(R)File 95:(c) 2004 FIZ TECHNIK. All rts. reserv.

Internet mit Windows NT. Internet-Information-Server

73/TI/41 (Item 3 from file: 95)  
DIALOG(R)File 95:(c) 2004 FIZ TECHNIK. All rts. reserv.

Supporting physical independence in an object **database server**

(Physikalische Datenabhaengigkeit in Objektdatenbanken)  
? ? t s73/7,de/1-41

73/7,DE/1 (Item 1 from file: 8)  
DIALOG(R) File 8:Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

06526708

E.I. No: EIP03387636944  
Title: Online multicast routing with bandwidth guarantees: A new approach using multicast **network** flow  
Author: Kodialam, Murali; Sengupta, Sudipta; Lakshman, T.V.  
Corporate Source: Bell Laboratories Lucent Technologies, Holmdel, NJ 07733, United States  
Source: IEEE/ACM Transactions on Networking v 11 n 4 August 2003. p 676-686  
Publication Year: 2003  
CODEN: IEANEP ISSN: 1063-6692  
Language: English  
Document Type: JA; (Journal Article) Treatment: T; (Theoretical); X; (Experimental)  
Journal Announcement: 0309W4

Abstract: This paper presents a new algorithm for online routing of bandwidth-guaranteed multicasts where routing requests arrive one by one without there being any a priori knowledge of future requests. A multicast routing request consists of a source *s*, a set of receivers *R*, and a bandwidth requirement *b*. This multicast routing problem arises in many contexts. Two applications of interest are routing of point-to-multipoint label-switched paths in multiprotocol label switched (MPLS) networks, and the provision of bandwidth-guaranteed virtual private network (VPN) services under the "hose" service model left bracket *l* right bracket . Offline multicast routing algorithms cannot be used since they require a priori knowledge of all multicast requests that are to be routed. Instead, online algorithms that **handle requests** arriving one by one and that satisfy as many potential future demands as possible are needed. The newly developed algorithm is an online algorithm and is based on the idea that a newly routed multicast must follow a route that does not interfere too much with network paths that may be critical to satisfy future demands. We develop a multicast tree selection heuristic that is based on the idea of deferred loading of certain critical links. These critical links are **identified** by the algorithm as links that, if heavily loaded, would make it impossible to satisfy future demands between certain ingress-egress pairs. The presented algorithm uses link-state information and some auxiliary capacity information for multicast tree selection and is amenable to distributed implementation. Unlike previous algorithms, the proposed algorithm exploits any available knowledge of the network ingress-egress points of potential future demands, even though the demands themselves are unknown, and performs very well. 23 Refs.

Descriptors: \*Multicasting; Bandwidth; Telecommunication networks; Signal receivers; Network protocols; Quality of service; Algorithms

73/7,DE/2 (Item 2 from file: 8)  
DIALOG(R) File 8:Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

06274552

E.I. No: EIP03047329568

Title: Jena: A semantic web toolkit

Author: McBride, Brian

Corporate Source: Hewlett-Packard Laboratories, Bristol, United Kingdom

Source: IEEE Internet Computing v 6 n 6 November/December 2002. p 55-58

Publication Year: 2002

CODEN: IICOFX ISSN: 1089-7801

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 0301W4

Abstract: The Semantic Web Activity at the World Wide Web Consortium aims to augment the current Web with information that a computer can use in applications that require machine understanding. As such, HP Labs developed the Jena toolkit to make it easier to develop applications that use the semantic Web information model and languages. Jena is a Java application programming interface that is available as an open-source download. (Edited abstract) 3 Refs.

Descriptors: World Wide Web; **Client server** computer systems; Java programming language; Object oriented programming; Relational database systems; Linguistics; Algorithms; Data communication systems

73/7,DE/3 (Item 3 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

05952758

E.I. No: EIP01496756625

Title: Integration of content based image retrieval system with PACS

Author: Ghanem, A.M.; Rasmy, M.E.M.; Kadah, Y.M.

Corporate Source: Biomedical Engineering Dept. Cairo University, Giza, Egypt

Conference Title: Medical Imaging 2001- PACS and integrated Medical Information Systems: Design and Evaluation

Conference Location: San Diego, CA, United States Conference Date: 20010220-20010222

Sponsor: SPIE

E.I. Conference No.: 58755

Source: Proceedings of SPIE - The International Society for Optical Engineering v 4323 2001. p 325-331

Publication Year: 2001

CODEN: PSISDG ISSN: 0277-786X

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications); T; (Theoretical)

Journal Announcement: 0112W3

Abstract: Content-based image retrieval (CBIR) provides a flexible means of searching a digital image library based on the description of the desired image. In this paper, we integrate CBIR, RIS, and HIS in PACS to allow retrieving images of similar features. Once the system finds the related images, the embedded CBIR retrieves the radiological reports and medical records of the output images, which can be used to increase diagnostic accuracy. The CBIR system is implemented on a separate server based on multi-resolution image matching. To reduce the retrieval loading on the server and network shanks, a procedure to use copies of images that are temporarily located in some workstations in the PACS is applied. These copies are stored on a temporary database space created on the different workstations. A new image retrieval management server contains image **IDs** in the **database** and the IP addresses of the workstations



containing temporary images copies. Data on the management server are continuously updated with each addition or retrieval operation. When a display workstation needs a specific image, it sends a request with the required image ID to the management server, which in turn replies with the IP of the workstation containing the inquired image ID. 10 Refs.

Descriptors: Information retrieval systems; Medical imaging; Computer software; Medical applications; Feature extraction; Systems analysis; Image quality; Image analysis; Database systems; Internet; Network protocols; **Client server** computer systems; Computer aided diagnosis

73/7,DE/4 (Item 4 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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04771642

E.I. No: EIP97083769751

Title: Microcell automatic propagation measuring system combined with **management database** - MAPS-MDB

Author: Kawasaki, Ryoji; Suwa, Keisuke; Ichitsubo, Shinichi; Oyoshi, Tomoyuki

Corporate Source: NTT Multimedia System Lab Group, Jpn

Source: NTT R&D v 46 n 5 1997. p 411-417

Publication Year: 1997

CODEN: NTTDEC ISSN: 0915-2326

Language: Japanese

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 9709W4

Abstract: In order to meet the great demand for wireless communication services, many efforts are underway to develop microcellular systems for efficient frequency utilization and power reduction. This paper describes a new microcell automatic propagation measuring system combined with a client-server system of the **management database** - MAPS-MDB -, which enables a computer-aided service-area to be drawn using the **map** /cell-site **database** in the client-**server** system. (Translated author abstract) 11 Refs.

Descriptors: \*Cellular radio systems; Database systems; Distributed computer systems; Data processing; Computer applications

73/7,DE/5 (Item 5 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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04641246

E.I. No: EIP97033560921

Title: Some experience using OODB in the interoperation of heterogeneous genome **database** systems

Author: Xu, Chuanbo; Razzak, Aamir; Saurugger, Peter N.

Corporate Source: Pioneer Hi-Bred Int, Inc, Johnston, IA, USA

Conference Title: Proceedings of the 1996 3rd Biennial Joint Conference on Engineering Systems Design and Analysis, ESDA. Part 2 (of 9)

Conference Location: Montpellier, Fr Conference Date: 19960701-19960704

Sponsor: ASME PD

E.I. Conference No.: 46123

Source: American Society of Mechanical Engineers, Petroleum Division (Publication) PD v 74 n 2 1996. ASME, New York, NY, USA. p 53-61

Publication Year: 1996

CODEN: ASMPEX

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications); T  
; (Theoretical)

Journal Announcement: 9704W4

Abstract: With the power of encapsulation, object-oriented (OO) paradigm and OO **database management** system (ODBMS) technology provides a way to make an interoperable environment by hiding data diversities. We have investigated this technique in the company's genome mapping and plant breeding projects where multiple relational **databases**, home-grown **database**, file system **server** and Internet data sources are already in use. In our system, we first solved the incompatibility of the object structures between the OO graphical user interface (GUI) and the ODBMS using the Meta-Object Protocol (MOP) of Common Lisp Object system (CLOS). The client objects are hence mirrored by the 'shadow objects' in the ODBMS **server**. For the object **database** (OODB), domain applications have been modeled with the Object Modeling Technique (OMT) and the core genetic objects have been identified. In the heterogeneous multidatabase system, the OODB plays the central repository role by storing the schema of the relational production databases (RDBs) and the data formatting information of the other external data sources to dispatch queries, and by interfacing user applications with a unified object format. An OO blackboard system is planned to hold these knowledge and to provide the intelligent database features. In the system, third-party, non-OO application programs are also integrated to provide the transparent data access and analysis services. (Author abstract) 24 Refs.

Descriptors: \*Database systems; Object oriented programming; Data structures; Graphical user interfaces; Network protocols; LISP (programming language); Expert systems

73/7,DE/6 (Item 6 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

04246821

E.I. No: EIP95092848075

Title: Distributed real-time **database** for heterogeneous computer control systems

Author: Madan, R.S.; Arora, R.K.; Purkayastha, P.

Corporate Source: Sagrik Process Analysts Pvt. Ltd, New Delhi, India

Conference Title: Proceedings of the IEEE/IAS International Conference on Industrial Automation and Control Conference

Conference Location: Hyderabad, India Conference Date: 19950105-19950107

E.I. Conference No.: 43515

Source: IEEE/IAS International Conference on Industrial Automation and Control, Proceedings 1995. IEEE, Piscataway, NJ, USA, 95TH8005. p 435-440

Publication Year: 1995

CODEN: 002119

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications)

Journal Announcement: 9511W1

Abstract: We have developed a Real-Time Distributed Database Management System (RTDDBMS) which manages data transparently in a heterogeneous, geographically distributed and an open system environment. In our scheme, the data is managed on each resource as a set of tables or relations. Access to data is transparent of its physical location as access

**requests** are handled by the database kernel. A copy of the database kernel resides on each node of the system. These kernels communicate with each other and also with client applications. All communications are through a set of predefined messages. The kernel does not distinguish between messages received from client applications and messages received from a remote kernel. Further, data is classified as local, remote and replicated. When a kernel receives a request for access to a particular data it checks to see if it is locally available. If it is not, then the kernel checks to **identify** the node(s) at which it is available. It then, like any client application, frames a message and sends a request to the kernel of that remote node. The kernel that has the data, which may be the local kernel, on receiving the request for the particular data item performs the desired transaction on it. After performing the transaction it returns the status of the transaction to the client application. (Author abstract) 411 Refs.

Descriptors: \*Distributed database systems; Computer control systems; Real time systems; Data communication systems; Classification (of information); Geographic information systems; Data handling

73/7,DE/7 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01917751 AADAAI3071994

A new bioinformatic resource: A heterotrimeric G-protein database (hGPDB)

Author: Lila, Rahim Shokat

Degree: Ph.D.

Year: 2002

Corporate Source/Institution: The University of Toledo (0232)

Adviser: Steven M. Peseckis

Source: VOLUME 63/11-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 5069. 162 PAGES

Descriptors: BIOLOGY, MOLECULAR ; COMPUTER SCIENCE

ISBN: 0-493-91864-7

Bioinformatics is the computer-assisted analysis, management, and manipulation of data related to biological systems. We have created a bioinformatic web-based resource to enhance research in heterotrimeric G-protein mediated signal transduction, a ubiquitous process that regulates many cellular functions. This resource facilitates analysis of existing physical and biological information as well as the formulation of hypotheses for further research and experimentation. A large amount of information relevant to heterotrimeric G-protein mediated signal transduction exists. Our database offers advantages that include dramatic decreases in the retrieval time of specified datatypes and access to information otherwise beyond electronic analysis.

Our heterotrimeric G-protein database is designed and developed to accommodate large amounts of data linked by complex relationships. Through the use of web pages and programs written in JAVA, the contents of the database are accessible using a web browser. In formulating conceptual and logical data models for the **database**, we **identified** a number of data entities and relationships needed to generate a minimum virtual representation of heterotrimeric G-protein mediated signal transduction. These objects and relationships were then incorporated into the physical programming and implementation of the database. In addition to the development of the database and a web application to access it, a desk top JAVA utility was written to facilitate the retrieval of the database's

information from public sources. Utilities to update, delete, or add information to the underlying database were constructed. We integrated a sequence alignment algorithm into the web application that allows users to align protein sequences. We enhanced the alignment output by adding color-coding. In addition to the interactive pages and tools that allow controlled access and queries to the database, users can view static web pages with information, links, and references related to heterotrimeric G-proteins. The database is constructed to be flexible and scalable, able to evolve and increase in utility with additional information and functionalities. We are the first to achieve the physical implementation of data, application, and presentation **client-server** layers essential for a functional web-based database focused on heterotrimeric G-protein mediated signal transduction.

73/7,DE/8 (Item 2 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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01566808 AAD9723141  
INFORMATION MANAGEMENT IN NEXT GENERATION CIM SYSTEMS (COMPUTER INTEGRATED MANUFACTURING, RELATIONAL **DATABASES**)  
Author: PATANKAR, AJIT KRISHNA  
Degree: PH.D.  
Year: 1996  
Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, BERKELEY (0028)  
Chair: ARIE SEGEV  
Source: VOLUME 58/02-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 897. 232 PAGES  
Descriptors: ENGINEERING, INDUSTRIAL ; COMPUTER SCIENCE ; OPERATIONS RESEARCH ; INFORMATION SCIENCE

This dissertation proposes a new approach to information management in Computer Integrated Manufacturing (CIM) systems. The approach is broadly based on the application and extension of the 3rd generation (TG) database technology. The TG databases subsume the second generation relational databases and include substantial additional functionality such as, a production rule system and database functions.

The research identified the important information management needs in CIM systems such as, flexibility, incremental automation, and distributed control. A critical review of the literature showed that none of the existing architectures were capable of meeting the information management needs of CIM systems. Therefore, a novel CIM information management architecture was proposed. In this architecture, manufacturing is modeled as a network of machines and assign a computer workstation called a 'server' to each machine. The information processing requirements of a production order or a lot are encapsulated in an object that migrates between servers after completion of an appropriate service. An event and rule based implementation and a layered approach allows the development of CIM systems that can be easily reconfigured in response to changes in products or processes. This architecture identifies two critical issues which have not been addressed in the information systems literature, namely, event **management** in active **databases** and a directory schema for migrating object systems. Therefore, the focus of the research was on these two issues.

In the CIM architecture, it was shown that significant gains in software productivity are possible if events in both the physical and information world are supported in a uniform fashion in an active

database. This capability is lacking in existing active databases, hence a new architecture and construction of an Event Manager was proposed. A SQL-like language is proposed for the registration, subscription, and cancellation of events. The notion of a renewal process for schedulable events is introduced and implemented using an event stack mechanism. As event histories can naturally be modeled as time series, temporal database services are utilized for storing event metadata and histories. Furthermore, it is shown that the proposed event management framework is capable of supporting context dependent and relative temporal events.

In the CIM architecture, the location of objects is not fixed--a problem that is not encountered in conventional distributed **databases** or client-**server** systems. A directory scheme is proposed that is a significant advance over similar proposals in the literature. A new paradigm of objects reporting their location to a directory server is shown to be more appropriate than the traditional method of directory servers polling sites in the network. An enhancement to the distributed Linear Hashing (LH\*) algorithm is proposed for determining the appropriate server for an object. A stochastic dynamic programming model has been developed to minimize the total number of messages transmitted to maintain the use the directory.

Next, the research was directed towards the implementation of a CIM system. The implementation validated important new notions proposed in the CIM architecture such as object mobility and event-rule based operation. This prototype clearly shows the validity of the architecture. A natural outcome of this implementation is an evaluation of the current state-of-the-art in active, object-relational databases.

Also, as a part the implementation, a new methodology was proposed for conceptual modeling in TG databases. This was required a a system design methodology for these databases does not exist. (Abstract shortened by UMI.)

73/7,DE/9 (Item 3 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01527248 AAD1382118  
NEURAL **NETWORK** MODELING AND OPTIMIZATION OF ZEOLITIC AUTOMOBILE  
EXHAUST CATALYSTS

Author: SRINIVASAN, NITHYA  
Degree: M.S.  
Year: 1996  
Corporate Source/Institution: UNIVERSITY OF LOUISVILLE (0110)  
Director: RAUL MIRANDA  
Source: VOLUME 35/01 of MASTERS ABSTRACTS.  
PAGE 288. 56 PAGES  
Descriptors: ENGINEERING, CHEMICAL ; ARTIFICIAL INTELLIGENCE ;  
ENGINEERING, AUTOMOTIVE

Recent research in automobile exhaust catalysts addresses the substitution of platinum-group metals Pt, Pd and **Rh** by metals such as Cu, Co, Ag, Zn, Mn and Sr impregnated on zeolites,  $\text{TiO}_2$  or  $\text{ZrO}_2$  carriers. Experimentally designing an exhaust catalyst to convert the pollutants such as hydrocarbons (HC), carbon monoxide (CO) and nitrogen oxides ( $\text{NO}_x$ ) into  $\text{H}_2\text{O}$ ,  $\text{CO}_2$  and  $\text{N}_2$  is expensive and time consuming. With the objective of **identifying** a simulation technique robust enough to be adaptable for designing catalysts, neural networks have been used to correlate the catalyst synthesis variables and

the resulting exhaust conversions, and hence determine the optimum catalyst composition and operating conditions for a specified exhaust conversion.

A back-propagation algorithm was used to train the network and the optimum architecture consisted of two hidden layers with 45 and 60 neurons in the first and second hidden layers respectively. The effects of learning factor and momentum gain coefficient were studied. The effects of the operating and compositional parameters on NO<sub>x</sub> conversion by Cu-ZSM-5 were found.

73/7,DE/10 (Item 1 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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3804453

Computerized **database** system for an effective usage of the National Infectious Disease Surveillance Scheme.

Author(s): Hasegawa, Shinsaku; Inoue, Masashi; Suyama, Akihiko  
Corporate Source: Hokkaido Institute of Public Health, Hokkaido 060-0819, Japan ; Tottori University, Tottori 683-8504, Japan ; Radiation Effects Research Foundation, Nagasaki 850-0013, Japan

Joho Kanri (Journal of Information Processing and Management) vol. 46, no. 6, pages 383-388

Publication Date: September 2003

ISSN: 0021-7298ISSN (electronic): 1347-1597

Journal URL: <http://johokanri.jstage.jst.go.jp/ja/>

Publisher URL: <http://www.jst.go.jp/EN/>

Language: Japanese

Document Type: Journal Article

Record Type: Abstract

Journal Announcement: 3809

The effective use of information gathered by Japan's National Infectious Diseases Surveillance Scheme is indispensable for early detection and prevention of these diseases. Describes the database system developed by the authors to distribute the information via the Internet using Apache as the Web **server**, MySQL as the **database management** system, and PHP script and GD library to automatically create graphic data such as visualized maps, graphs, and bar charts. Explains that the system provides warning information of prevalent diseases and uses scalable vector graphics (SVG) to display chronological and location progress in disease prevalence.

Descriptors: Biomedical information; Information resources **management** ; **Databases**; Design

73/7,DE/11 (Item 2 from file: 202)  
DIALOG(R)File 202:Info. Sci. & Tech. Abs.  
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2900042

Query language execution on heterogeneous **database servers** using a bind-file bridge between application and **database** languages.

Author(s): Adair, J G; Demers, R.A.; Ecimovic, D.; Grafe, R.J.; et al.

Patent Number(s): US 5257365

Publication Date: Oct 26, 1993

Language: English

Document Type: Patent

Record Type: Abstract

Journal Announcement: 2900

Application programs which are developed and scheduled within a first computing system environment are permitted to access relational data registered at a remote **database management** system (DBMS) operating in a second computing environment dissimilar to the first computing environment. Access to data through the DBMS from an application execution site remote from the DBMS is supported by a process, logically subordinate to the application program which maps application program data access requests to the DBMS.

Descriptors: Computer programs; **Database management** systems;  
Patents; Query languages

73/7,DE/12 (Item 1 from file: 65)  
DIALOG(R)File 65:Inside Conferences  
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01512408 INSIDE CONFERENCE ITEM ID: CN015014152  
E.Q.U.U.S.-A client-**server** laboratory **management database**  
using spreadsheet clients

Brown, C. G.; Hodgson, D.; Dear, S.; Durbin, S.  
CONFERENCE: Genome mapping and sequencing-Meeting  
ABSTRACTS OF PAPERS PRESENTED AT THE MEETING ON GENOME MAPPING AND  
SEQUENCING, 1996 P: 37  
Cold Spring Harbor Laboratory, 1996  
LANGUAGE: English DOCUMENT TYPE: Conference Abstracts and programme  
CONFERENCE SPONSOR: Cold Spring Harbor Laboratory (CSH)  
CONFERENCE LOCATION: Cold Spring Harbor, NY  
CONFERENCE DATE: May 1996 (19960) (19960)  
DESCRIPTORS: genome mapping; CSH

73/7,DE/13 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

7753147 INSPEC Abstract Number: C2003-11-7250-013  
Title: Information retrieval Z39.50 for protocol specification  
Author(s): Mahar, F.  
Author Affiliation: Dept. of Electr. Eng. & Comput. Sci., Balochistan  
Univ. of Eng. & Technol., Khuzdar, Pakistan  
Journal: Pakistan Journal of Information and Technology vol.2, no.2  
p.140-7  
Publisher: Science Publications,  
Publication Date: April-June 2003 Country of Publication: Pakistan  
CODEN: PJITAL ISSN: 1682-6027  
SICI: 1682-6027(200304/06)2:2L.140:IRPS;1-0  
Material Identity Number: N537-2003-003  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)  
Abstract: An information retrieval service describes an activity between two applications: an initiating application, the client, and a responding application, the server. The server is associated with one or more databases. Communication between **client** and **server** is carried out by the Z39.50 protocol. The protocol specifies format and procedures

governing the exchange of messages between **client** and **server**, thus enabling a **client** to request that the server searches a **database** and **identifies** records that meets specified criteria and retrieves some or all of the identified records. This paper describes the protocol procedures, protocol model, rules of extensibility, general and specific conformance requirements and detail requirements for the protocol addresses communication between the **client** and **server**.

(5 Refs)

Subfile: C

Descriptors: **client-server** systems; information retrieval; protocols

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73/7,DE/14 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

7726274 INSPEC Abstract Number: C2003-10-6110J-004

Title: A CORBA persistent state service based on a UML model to a relational **database** mapping

Author(s): Mitterdorfer, S.; Teiniker, E.; Kreiner, C.; Weiss, R.; Kovacs, Z.

Author Affiliation: Inst. for Tech. Informatics, Graz Univ. of Technol., Austria

Conference Title: Proceedings of the IASTED International Conference Information Systems and Databases p.55-60

Editor(s): Kiyoki, Y.; Yoshikawa, M.; Tanaka, K.

Publisher: ACTA Press, Anaheim, CA, USA

Publication Date: 2002 Country of Publication: USA ii+294 pp.

ISBN: 0 88986 362 8 Material Identity Number: XX-2003-00707

Conference Title: ISDB'02: IASTED International Conference on Information Systems and Databases

Conference Sponsor: IASTED

Conference Date: 25-27 Sept. 2002 Conference Location: Tokyo, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: In recent years, middleware industry, and particularly the CORBA project, have strongly integrated several aspects derived from **databases**: persistence, transaction **management**, security, etc.

However, there still is a conceptual "impedance mismatch" between the CORBA concepts and the concepts used in connection with databases (often referred to as a foundation of persistence). Bridging this gap often leads to significant developing effort. We show a mapping of UML classes (components) to relational databases and focus our work on dynamically generated CORBA interfaces. Starting with an UML model represented in the XML Metadata Interchange (XMI) format, a code generator writes consistent interface definitions and SQL scripts for relational database schema manipulation. This provides enough details for a **database** access **server** to allow the building of a database access code at run-time. The server is based on the CORBA Dynamic Skeleton Interface (DSI). (16 Refs)

Subfile: C

Descriptors: distributed object management; hypermedia markup languages; meta data; middleware; object-oriented databases; persistent objects; relational databases; specification languages; SQL

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73/7,DE/15 (Item 3 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6960748 INSPEC Abstract Number: C2001-08-6160B-001

Title: Application of middleware in the three tier **client/server** database design methodology

Author(s): Fong, J.; Hul, R.

Journal: Journal of the Brazilian Computer Society vol.6, no.1

Publication URL: <http://www.scielo.br/jbcos.htm>

Publisher: Soc. Brasileira de Computacao,

Publication Date: 1999 Country of Publication: Brazil

ISSN: 0104-6500

Material Identity Number: H782-2001-001

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: With the popularity of personal computers and powerful workstations, today's users are no longer satisfied with traditional data processing. They demand the easy addition of graphics to applications, putting pressure on system re-engineering. The **client-server** architecture is a low risk approach to add a graphical user interface for users. The developer has to determine the data and program logic distribution between the **client**, the middleware **server**, and the top tier server. Middleware links software running on different platforms. It plays an important role in the 3 tier architecture. There are two types of middleware: the first connects **client** programs to **server** programs, and the second provides data access to heterogeneous data sources. The developer needs to separate online transaction processing, project-oriented data processing, and historical data from each other. This paper outlines a methodology to design a 3 tier **client server database** system. It **identifies** the role of middleware as temporary storage for better performance, and as a database gateway for DBMS connectivity. Case studies are used for illustration of the steps involved. (14 Refs)

Subfile: C

Descriptors: application program interfaces; **client-server** systems; distributed databases

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73/7,DE/16 (Item 4 from file: 2)  
DIALOG(R)File 2:INSPEC  
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6818744 INSPEC Abstract Number: C2001-02-6160D-009

Title: Process model for round-trip engineering with relational database

Author(s): Maciaszek, L.A.

Author Affiliation: Dept. of Comput., Macquarie Univ., Sydney, NSW, Australia

Conference Title: Challenges of Information Technology Management in the 21st Century. 2000 Information Resources Management Association International Conference p.468-72

Publisher: Idea Group Publishing, Hershey, PA, USA

Publication Date: 2000 Country of Publication: USA 1227 pp.

ISBN: 1 878289 84 5 Material Identity Number: XX-2000-00984

Conference Title: Proceedings of 2000 Information Resources Management Association International Conference

Conference Date: 21-24 May 2000      Conference Location: Anchorage, AK, USA

Language: English      Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: Iterative and incremental development of **client/server** database systems requires a round-trip engineering support, in particular in a design-implementation cycle. This paper identifies some more difficult round-trip engineering scenarios and defines processes needed to handle those scenarios. The processes conform to the current state-of-the-practice in forward and reverse engineering with relational **databases**. The paper **identifies** limitations of a tool-driven round-trip engineering. The limitations can be linked to three reasons: (1) the inability of a CASE/4GL tool to always generate correct incremental code after schema has been changed, (2) the need for a CASE/4GL to understand the reverse-engineered procedural parts written (or modified) in the implementation phase, (3) the requirement that a database content (extension) be reinstated at the end of each design-implementation cycle. Technical limitations introduce a risk that design models and a database implementation become misaligned and the design-implementation cycle cannot be continued for iterative and incremental software production. Project managers need a process model to impose necessary rigour on design and programming teams to alleviate technical restrictions. The paper defines a project management strategy that enforces appropriate automated and manual processes on database development teams. (14 Refs)

Subfile: C

Descriptors: relational databases; reverse engineering; software development management; software process improvement

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73/7,DE/17      (Item 5 from file: 2)

DIALOG(R)File    2:INSPEC

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6002152    INSPEC Abstract Number: B9810-6210L-017, C9810-7210-005

Title: Access to databases with Internet network-Internet database connection mechanism

Author(s): Ciesla, S.

Author Affiliation: Inst. Inf., Politech. Slaska, Poland

Journal: Zeszyty Naukowe Politechniki Slaskiej, Seria: Informatyka  
no.32    p.415-26

Publisher: Wydawnictwo Politech. Slaskiej,

Publication Date: 1997    Country of Publication: Poland

CODEN: ZNPIET    ISSN: 0208-7286

SICI: 0208-7286(1997)32L:415:ADWI;1-J

Material Identity Number: H071-98006

Language: Polish      Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The article discusses access to databases through the Internet using the mechanism: Internet Database Connector. The article is divided into seven parts. The first one discusses ideology of access to remote databases from Internet's point of view using HTTP protocol and HTML language for this purpose. The second part describes characteristic of Internet Database Connector method and the possibility of using this method of Internet server. The interface between **IDC** and **database** by means of ODBC connectivity is also described. The third section discusses an idea of how IDC works. Web browsers submit a request to the Internet server by using HTTP. The Internet server responds with a document

formatted in HTML. Access to databases is accomplished through a component of the Internet Information Server called the Internet **Database Connector**. The **IDC**, main component Httpodbc.dll, is an ISAPI DLL that uses ODBC to gain access to databases. The fourth part describes the way to contact with **databases**. The **IDC** uses two types of files to control how the database is accessed and how the output Web page is constructed. These files are Internet **Database Connector (.IDC)** files and HTML extension (.HTX) files. The next part discusses the security aspects of using database access via Internet, and secure data from being locally accessed by the user. (4 Refs)

Subfile: B C

Descriptors: **client-server** systems; hypermedia; Internet; online front-ends; page description languages; protocols  
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73/7,DE/18 (Item 6 from file: 2)  
DIALOG(R) File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5878298 INSPEC Abstract Number: B9805-6210L-052, C9805-6160B-019  
Title: Database caching over the air-storage  
Author(s): Hong Va Leong; Si, A.  
Author Affiliation: Dept. of Comput., Hong Kong Polytech. Univ., Hung Hom, Hong Kong  
Journal: Computer Journal vol.40, no.7 p.401-15  
Publisher: Oxford University Press for British Comput. Soc,  
Publication Date: 1997 Country of Publication: UK  
CODEN: CMPJA6 ISSN: 0010-4620  
SICI: 0010-4620(1997)40:7L:401:DCOS;1-H  
Material Identity Number: C022-98002  
Language: English Document Type: Journal Paper (JP)  
Treatment: Practical (P)

Abstract: Previous research on broadcast databases in a mobile computing environment utilizing wireless channels has been focused on mechanisms for a mobile client to selectively pick database items in which the client is interested from a broadcast channel. The fundamental issue of **identifying** the appropriate **database** items for broadcast or refrained from being broadcast have largely been ignored. In this paper, we consider the concept of "air-storage", by treating the wireless broadcast media as a layer of cache storage. Broadcasting database items over the air-storage becomes similar in spirit to the caching of database items from the database server. Similarly, determining which database items need to be broadcast or refrained from being broadcast becomes similar in nature to cache management. Existing caching mechanisms are reviewed and management issues specific to the new air-storage are raised and discussed. In view of new issues in air-storage management, we propose and investigate several mechanisms in selecting the proper database items to be placed over this new layer of air-storage under a variety of data access patterns. Finally, the effectiveness of the mechanisms is evaluated by means of simulated experiments and the results are discussed. (21 Refs)

Subfile: B C

Descriptors: cache storage; **client-server** systems; distributed databases; information networks; mobile radio; wireless LAN  
Copyright 1998, IEE

73/7,DE/19 (Item 7 from file: 2)

DIALOG(R) File 2:INSPEC

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5870521 INSPEC Abstract Number: C9805-6160B-008

Title: Client-based transactions across database boundaries

Author(s): Weihai Yu; Rafaelsen, H.O.

Author Affiliation: Dept. of Comput. Sci., Tromso Univ., Norway

Conference Title: Data Mining, Data Warehousing and Client/Server Databases. Proceedings of the 8th International Database Workshop p. 285-97

Editor(s): Fong, J.

Publisher: Springer-Verlag Singapore, Singapore

Publication Date: 1997 Country of Publication: Singapore xi+332 pp.

ISBN: 981 3083 54 9 Material Identity Number: XX98-00279

Conference Title: Proceedings of 8th International Hong Kong Computer Society Database Workshop. Data Mining, Data Warehousing and Client/Server Databases

Conference Sponsor: Oracle Syst. Hong Kong; NCR (Hong Kong); Sybase Hong Kong; Hewlett-Packard Hong Kong; et al

Conference Date: 29-31 July 1997 Conference Location: Hong Kong

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: When database services are offered in a distributed environment such as the World Wide Web, one of the issues is to maintain the consistency of the user's requests over multiple **database** systems. We **identify** the characteristics of such an environment and argue that existing approaches to transaction management across database boundaries are not appropriate for such an environment. We propose a client-based approach for transaction management that avoids the problems of the existing approaches. Despite the restrictions of the approach, it is simple to implement, maintains system autonomy and guarantees the necessary consistency properties. (9 Refs)

Subfile: C

Descriptors: **client-server** systems; concurrency control; data integrity; distributed databases; Internet; transaction processing

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73/7,DE/20 (Item 8 from file: 2)

DIALOG(R) File 2:INSPEC

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4468232 INSPEC Abstract Number: C9310-7190-010

Title: Historical pavement **management database** feasibility study

Author(s): Svalstad, D.K.; Kephart, E.M.; Baird, G.T.; Eslinger, N.M.

Author Affiliation: RE/SPEC Inc., Rapid City, SD, USA

Conference Title: Microcomputer in Transportation. Proceedings of the 4th International Conference p.584-95

Editor(s): Chow, J.; Litvin, D.M.; Opiela, K.S.

Publisher: American Soc. Civil Eng, New York, NY, USA

Publication Date: 1993 Country of Publication: USA viii+860 pp.

ISBN: 0 87262 875 2

Conference Sponsor: American Soc. Civil Eng.; American Assoc. State Highway & Transp. Officials; et al

Conference Date: 22-24 July 1992 Conference Location: Baltimore, MD, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Technological and operational issues related to implementing a historical database to support the South Dakota Department of Transportation's current and future pavement management activities are addressed. Representative statewide historical transportation databases are examined for potential direct implementation by South Dakota, and a conceptual client-server relational database design that will provide the required flexibility, extensibility, and functionality is presented. The conceptual design addresses operational and design issues related to data integrity and consistency, provides desk-top microcomputer access to South Dakota's historical highway system information, and provides a basis for future extension to a truly distributed environment that integrates geographic information system and mapping databases as well as highway imaging systems. (1 Refs)

Subfile: C

Descriptors: microcomputer applications; relational databases; town and country planning

73/7,DE/21 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

03723824 INSPEC Abstract Number: B90064157, C90065437

Title: The new space and Earth science information systems at NASA's archive

Author(s): Green, J.L.

Author Affiliation: NASA Goddard Space Flight Center, Greenbelt, MD, USA

Journal: Government Information Quarterly vol.7, no.2 p.141-7

Publication Date: 1990 Country of Publication: UK

CODEN: GIQUEU ISSN: 0740-624X

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The National Space Science Data Center (NSSDC), established in 1967, serves as a long-term archive and distribution center for data obtained on NASA space science flight investigations and provides a variety of services. NASA science data at the NSSDC cover the disciplines of astrophysics, planetary physics, and space plasma physics. Over 6000 gigabytes of digital data (125000 magnetic tapes) and 91 million feet of film products from NASA science missions have been acquired by the NSSDC. To handle the requests for both digital and film products, the NSSDC has a variety of computer systems, both interactive and batch; dedicated photolaboratory facilities; large online database management machines; and optical mass storage devices. It also manages NASA's largest computer-to-computer wide area network. With the ease of electronic access dramatically increasing, the NSSDC has created a major new thrust by developing online computer information systems accessible to remote users 24 hours a day. Currently, not all the information about the NSSDC archive is accessible to remote users, and less than 2 percent of the NSSDC's total digital data archive is online, but these systems are already a major achievement in providing rapid access to NASA-acquired science data that is unprecedented in archive data management. The author focuses on these new online interactive systems that are used extensively over international computer networks. (8 Refs)

Subfile: B C

Descriptors: aerospace computing; computer networks; geophysics computing; government data processing; information services; physics computing

73/7,DE/22 (Item 10 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

03208642 INSPEC Abstract Number: C88053317

Title: KIWI: knowledge-based user-friendly system for the utilization of information bases

Author(s): Larsen, H.L.

Author Affiliation: Dansk Datamatik Centre, Copenhagen, Denmark

Conference Title: Knowledge Engineering - Expert Systems and Information Retrieval p.113-26

Editor(s): Wormell, I.

Publisher: Taylor Graham, London, UK

Publication Date: 1987 Country of Publication: UK 182 pp.

ISBN: 0 947568 30 1

Conference Date: Dec. 1986 Conference Location: Copenhagen, Denmark

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The aim of KIWI is to provide the information user with an intelligent and friendly interface for utilization of information in the large number of **databases** available from **database management** systems (DBMSs) and information retrieval systems (IRSs). The retrieval of information is supported by an intermediary expert system. The world and domain knowledge needed by this expert system is modelled by term relationships forming a semantic **network**. The term relationships refine the traditional term relationship types used in IR thesauri, such as broaden and related, into the fundamental abstraction types classification, generalization, and aggregation, as well as more domain specific relationship types. Specifically, the term relationships are used for information space zooming in the **handling** of approximate **requests** (or goals). (5 Refs)

Subfile: C

Descriptors: expert systems; indexing; information retrieval; thesauri; user interfaces

73/7,DE/23 (Item 11 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

02354457 INSPEC Abstract Number: C85002107

Title: Fast access to archival information stored on optical memory discs

Author(s): Bittner, H.; Kromker, D.; Lenzer, R.; Olsowski, H.D.

Author Affiliation: Tech. Hochschule Darmstadt, West Germany

Conference Title: Eurographics '83. Proceedings of the International Conference and Exhibition p.353-65

Editor(s): Ten Hagen, P.J.W.

Publisher: North-Holland, Amsterdam, Netherlands

Publication Date: 1983 Country of Publication: Netherlands xii+401 pp.

ISBN: 0 444 86770 8

Conference Date: 31 Aug.-2 Sept. 1983 Conference Location: Zagreb, Yugoslavia

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: A data processor based on a multi-microprocessor system

managing archival data was developed for the use in local area **networks** . To grant fast and easy access from office workstations to heterogeneous information stored on optical memory discs, a new strategy of storing data and **handling** user **requests** was designed. (17

Refs)

Subfile: C

Descriptors: computer **networks**; **database management** systems; optical storage; video and audio discs

73/7,DE/24 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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05642194 JICST ACCESSION NUMBER: 03A0751954 FILE SEGMENT: JICST-E

An Implementation of **Network Management Database**.

OGAITO TATOKU (1); YAMASHITA YOSHINORI (1)

(1) Fukui Med. Sch.

Joho Shori Gakkai Kenkyu Hokoku, 2003, VOL.2003,NO.96(DSM-30), PAGE.1-6,

FIG.2, TBL.1, REF.8

JOURNAL NUMBER: Z0031BAO ISSN NO: 0919-6072

UNIVERSAL DECIMAL CLASSIFICATION: 621.394/.395 681.3:061.68

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Although management of LAN is very important item, the human resources we can assign to is limited. We have developed a system, which supports the registration of the terminal and LAN management, based on SQL **database server** and WWW. In the results, it releases members of information processing center from the simple but tedious work. (author abst.)

DESCRIPTORS: network management; database; WWW(communication); operation(management); SQL(software); communication administration; university

BROADER DESCRIPTORS: management; information system; computer application system; system; application oriented language; programming language; formal language; language; school

73/7,DE/25 (Item 2 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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00420808 JICST ACCESSION NUMBER: 87A0266583 FILE SEGMENT: JICST-E

Toward construction of a simple patent **database** covering the precious metal field.

KOSAKA REIKO (1)

(1) Tanaka Kikinzoku Kogyo Co., Ltd.

Joho Kagaku Gijutsu Kenkyu Shukai Happyo Ronbunshu(Proceedings of the Annual Meeting on Information Science and Technology), 1987, VOL.23rd, PAGE.135-141, FIG.2, TBL.4, REF.4

JOURNAL NUMBER: S0306ABA

UNIVERSAL DECIMAL CLASSIFICATION: 347.77+608 669:002

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Conference Proceeding

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: TANAKA KIKINZOKU KOGYO K.K. manually searches about 2,000 patents per year limited to the claims concerning precious metals (Ag, Au, Pt, Pd, Rh, Ir, Ru and Os) and Re from Japanese Patent Gazette and Utility Model Gazette, which notifies them as applied. Taking these patents as information sources the titles and applicants were translated into English to make them available for foreign organizations. Bibliographical information essential to **identify** each record was also added. The database including the above items is compiled easily and concisely because a word processor is used for the input. The output format comprises a list of patents by precious metal element or international patent classification as well as a list of applicants in the alphabetical order by country origin. Comparisons of this database and that of PATOLIS Online Service are reported. (author abst.)

DESCRIPTORS: patent document; Japan; utility model; database; precious metal; patent classification; applicant; information retrieval system; word processor

BROADER DESCRIPTORS: publications; resource(document); East Asia; Asia; industrial property; intellectual property; right; metal; classification; information system; computer application system; system; special purpose computer; computer; hardware

73/7,DE/26 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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2063669 NTIS Accession Number: PB98-134752/XAB

Federal Implementation Guideline for Electronic Data Interchange: ASC X12 003070 Transaction Set 242 Data Status Tracking. Implementation Convention (Special pub)

Favreau, J. P.

National Inst. of Standards and Technology (ITL), Gaithersburg, MD. Electronic Commerce Acquisition Program Management Office.

Corp. Source Codes: 113284007

Report Number: NIST/SP-881-29

Jan 98 26p

Languages: English

Journal Announcement: GRAI9813

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NTIS Prices: PC A03/MF A01

Country of Publication: United States

This Draft Standard for Trial Use contains the format and establishes the data contents of the Data Status Tracking Transaction Set (242) within the context of an Electronic Data Interchange (EDI) environment. This management transaction set is the vehicle by which the transmission status information is conveyed by a service **request handler** to the interchange sender, interchange receiver, or both; it can be used to provide status information regarding interchange as it flows from an interchange sender through one or more service **request handlers** to an interchange receiver during its transmission cycle. It can be used by the interchange sender or interchange receiver to request from a service **request handler** ad hoc or periodic reports containing status information regarding interchanges.

Descriptors: Accounting; \*Information systems; \*Standards; \*Contract



administration; \*Procurement; Logistics **management**; Computer programs  
; **Databases**; Data processing; Commerce; Computer **networks**;  
Telecommunication; Acquisition; Government agencies; Industries; United  
States; Scheduling; Purchasing; Electronic mail

73/7,DE/27 (Item 2 from file: 6)  
DIALOG(R)File 6:NTIS  
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1787150 NTIS Accession Number: AD-A274 704/6  
Student Research Projects, 1993  
(Technical note)  
Yeske, L. A. ; Perrin, P. ; Petry, F. ; Moorhead, R. ; Zhu, Z.  
Mississippi State University, Stennis Space Center. Center for Air Sea  
Technology.  
Corp. Source Codes: 106836001; 426578  
Report Number: CAST-TN-02-94  
31 Dec 93 25p  
Languages: English  
Journal Announcement: GRAI9409  
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customers); (703)605-6000 (other countries); fax at (703)321-8547; and  
email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road,  
Springfield, VA, 22161, USA.  
NTIS Prices: PC A03/MF A01  
Country of Publication: United States  
Contract Number: N00014-92-J-4109

Eleven 1993 student research projects were sponsored by the Mississippi  
State University Center for Air Sea Technology. This technical note  
describes these projects which include knowledge discovery for ocean  
modeling, scientific visualization enhancements, object-oriented access to  
data, intelligent interfaces for defining data, data browsing, database  
administrative tools, graphics support for ocean modeling, the Ocean  
Visualization Interactive Research Toolkit, **client/server** model  
access, database applications and their documentation, tactical  
oceanography wide area network export grid, and **database** duplicate  
**identifiers**. Technical note, Student, Research, CAST.

Descriptors: \*Data bases; \*Oceanography; Access; Grids; Interfaces;  
Mississippi; Models; Networks; Oceans; Students; Universities; Wide area  
networks; Research management; Abstracts; Reports

73/7,DE/28 (Item 3 from file: 6)  
DIALOG(R)File 6:NTIS  
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1465287 NTIS Accession Number: AD-A211 769/5  
Knowledge-Based System Analysis and Control Defense Switched  
**Network** Task Areas  
(Annual rept. 1 Oct 87-30 Sep 88)  
Heggstad, H. M.  
Massachusetts Inst. of Tech., Lexington. Lincoln Laboratory  
Corp. Source Codes: 009875001; 207650  
Sponsor: Electronic Systems Div., Hanscom AFB, MA.  
Report Number: ESD-TR-88-314  
11 Jul 89 74p  
Languages: English

Journal Announcement: GRAI8924

Original contains color plates: All DTIC and NTIS reproductions will be in black and white.

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NTIS Prices: PC A04/MF A01

Country of Publication: United States

Contract Number: F19628-85-C-0002

An Interactive Defense Switched Network Simulator (IDSIM) has been implemented, consisting of an enhanced Call-by-Call Simulator (CCSIM) in one computer interfaced with a Network Management Expert System (NMES) in a second computer. The operation of IDSIM is similar to that of a real-world theater Defense Switched Network (DSN) and its community of users, at a future time when the DSN is fully installed and an Expert System at each theater operations center performs DSN network management (NM) functions. Within IDSIM, NMES collects periodic activity reports from each simulated DSN switch in CCSIM, analyzes them to **identify** network problems, and applies control commands to the simulated switcher to circumvent the problems as well as possible. By inducing network fault and overload conditions, applying controls, and studying the results, an experimenter can exploit IDSIM as a system engineering tool to develop NM strategies for the DSN. This report describes IDSIM as well as a set of NM study results obtained with this tool. The report also describes the applicability of CCSIM as a near-term training device for human DSN NM operators, and analyzes expert system applicability to Defense Data Network (DDN) management. (RH)

Descriptors: \*Computer programs; \*Computers; \*Defense systems; \*Networks; \*Systems engineering; Communities; Faults; Management; Management planning and control; Overload; Reports; Theater level operations; Training devices

73/7,DE/29 (Item 4 from file: 6)

DIALOG(R)File 6:NTIS

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1462915 NTIS Accession Number: AD-D014 181/2

Multiple Channel Fast Orthogonalization **Network**  
(Patent)

Gerlach, K.

Department of the Navy, Washington, DC.

Corp. Source Codes: 001840000; 110050

Report Number: PAT-APPL-6-761 648; PATENT-4 797 807

Filed 2 Aug 85 patented 10 Jan 89 8p

Languages: English Document Type: Patent

Journal Announcement: GRAI8923

Supersedes PAT-APPL-6-761 648, AD-D011 918.

This Government-owned invention available for U.S. licensing and, possibly, for foreign licensing. Copy of patent available Commissioner of Patents, Washington, DC 20231 \$1.50.

NTIS Prices: Not available NTIS

Country of Publication: United States

United States Patent. A method for orthogonalizing inputs with respect to each other. The method comprises the steps of : generating a root structure of N inputs having input order 1 to N, where 2 to (m-1) power < 2 to the m power and m is an integer >1; inverting the order of the root structure to generate an inverted root structure having input order N to 1; partially

orthogonalizing the root structure and the inverted root structure in associated respective decorrelation circuits to remove inputs common to the first 2 to (m-I) power inputs where I=1; splitting off two substructure from the root structure, where the first structure has input order 1 to 2 to (m-I) power and the second substructure has input order 2 to (m-I) power to 1, where I=1; splitting off two substructure from the inverted root structure where the first substructure has input order 2m to 2 to (m-I) power and the second substructure has input order 2 to (m-I) power to 2m, where I=1; partially orthogonalizing each of the substructures in associated respective decorrelation circuits to remove inputs common to their first 2 to (m-I) power inputs, where I=2; and repeating the splitting off steps and the subsequent partially orthogonalizing step until only one input remains, where for each repetition the substructures that are split-off are treated as new root structure and new inverted root structure, and the value **identified** for I in each step is increased by 1. Patents. (RH)

Descriptors: \*Circuits; \*Patents; Inversion; Multichannel

73/7,DE/30 (Item 5 from file: 6)  
DIALOG(R)File 6:NTIS  
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1416261 NTIS Accession Number: AD-A201 623/6  
Management Requirements of the 3COM Ethernet Local Area **Network**  
(Master's thesis)  
Geiger, B. K.  
Naval Postgraduate School, Monterey, CA.  
Corp. Source Codes: 019895000; 251450  
Sep 88 55p  
Languages: English Document Type: Thesis  
Journal Announcement: GRAI8908  
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

Country of Publication: United States

The Marine Corps has installed 3COM Ethernet Local Area Networks (LANs) at various sites upon implementation of the Recruit Services Management Information System. With the introduction of new technology comes the requirement to administer the network. This paper describes LAN services available on the network, management philosophies for the LAN services, and areas of LAN administration considered important to the successful operation and maintenance of a LAN. LAN administration problems **identified** by users are also addressed. Keywords included; Local area network (LAN); Lan management; Lan administration; 3COM Ethernet LAN. Theses. (rh)

Descriptors: \*Computer communications; \*Communications networks; Management; Marine Corps; Military requirements; Theses; Short range(Distance); Management information systems; Recruiting

73/7,DE/31 (Item 6 from file: 6)  
DIALOG(R)File 6:NTIS  
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1388703 NTIS Accession Number: AD-A196 234/9

Radial Basis Functions, Multi-Variable Functional Interpolation and Adaptive **Networks**

(Memorandum rept)

Broomhead, D. S. ; Lowe, D.

Royal Signals and Radar Establishment, Malvern (England).

Corp. Source Codes: 053783000; 409929

Sponsor: Defence Research Information Centre, Orpington (England).

Report Number: RSRE-MEMO-4148; DRIC-BR-106143

28 Mar 88 38p

Languages: English

Journal Announcement: GRAI8822

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A03/MF A01

Country of Publication: United Kingdom

The relationship between 'learning' in adaptive layered networks and the fitting of data with high dimensional surfaces is discussed. This leads naturally to a picture of 'generalization in terms of interpolation between known data points and suggests a rational approach to the theory of such networks. A class of adaptive networks is **identified** which makes the interpolation scheme explicit. This class has the property that learning is equivalent to the solution of a set of linear equations. These networks thus represent nonlinear relationships while having a guaranteed learning rule. Great Britain. (RH)

Descriptors: \*Adaptive systems; \*Learning; \*Networks; Data bases; Interpolation; Layers; Multivariate analysis; Solutions(General); Surfaces

73/7,DE/32 (Item 7 from file: 6)

DIALOG(R)File 6:NTIS

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1326409 NTIS Accession Number: TIB/B87-80654

Konvergenzuntersuchung fuer einen Algorithmus zur Kompensation von Echos mit Frequenzversatz in Fernsprechnetzen. (Convergence Investigation for An Algorithm for The Compensation of Echoes with Frequency Displacement Occuring in Telecommunication **Networks**)

Schuetze, H.

Deutsche Bundespost, Darmstadt (Germany, F.R.). Fernmeldetechnisches Zentralamt.

Corp. Source Codes: 008312001

Report Number: FTZ-FI--444-TB-14

Sep 86 46p

Languages: German

Journal Announcement: GRAI8723

In German,

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC E07

Country of Publication: Germany, Federal Republic of

Echo signals with frequency displacement can occur on telecommunication networks. They can only be reduced by echo compensators if one can succeed in **identifying** this frequency displacement. Algorithms are known which can do this, but the conditions in which they behave in a stable

manner and converge have not previously been examined. This report supplies the proof of stability and convergence for an algorithm to compensate echoes with frequency compensation. The method shown here can also be transferred to other adaptive algorithms. (orig./RHM). (Copyright (c) 1987 by FIZ. Citation number 87:080654.)

Descriptors: \*Echo suppressors; Telephony; Voice communication; Algorithms; Convergence; Stability; Damping tests; Frequency shift

73/7,DE/33 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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12620859 Genuine Article#: 807HJ Number of References: 36  
Title: Immunological tolerance loss vs. erythrocyte self antigens and cytokine **network** dysregulation in autoimmune hemolytic anaemia  
Author(s): Fagiolo E (REPRINT)  
Corporate Source: Via Appia Nuova 633/I-00179 Rome//Italy/ (REPRINT); Univ Catholic Sacro Cuore, Immunohematol & Blood Transfus Unit, Rome//Italy/  
Journal: AUTOIMMUNITY REVIEWS, 2004, V3, N2 (FEB), P53-59  
ISSN: 1568-9972 Publication date: 20040200  
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS  
Language: English Document Type: ARTICLE  
Abstract: Recent studies on animal and human autoimmune hemolytic anaemia (AIHA) suggest that the loss of immunological tolerance vs. erythrocyte (Er) self antigens (Ag) may be primed by different mechanisms: ignorance of Er self Ag.. molecular mimicry between self and non-self Ag, polyclonal T and/or B cells activation, errors in central or peripheral tolerance, immunoregulatory disturbances including the alteration of cytokines network. In vitro stimulation by synthetic **Rh** peptides indicates that ignorant T and/or B cells from patients with AIHA may recognize cryptic Er self Ag. The AIHA associated with bacterial or viral infections seems to be produced by polyclonal T and/or B cell activation against foreign Ag that mimics protein or carbohydrate epitopes on Er. Polyclonal activation of host B cell clones by donor T cells causes the AIHA in chronic graft-versus-host disease. Mouse lines expressing a transgene with autoantibody (autoAb) activity against murine Er have shown that non-deleted peripheral B cell clones may produce Er autoAb. In human a genetic defect of Fas/FasL autoreactive lymphocyte apoptosis may be associated with AIHA. Th1/Th2 cytokines or IL10/IL12 imbalance may induce AIHA: in NZB mice and in human AIHA there is an increased production of Th2 cytokines such as IL4 and IL10 but INF-gamma and IL12 reduced production. Particularly, IL10 seems to act as critical mediator for the Er autoAb production. (C) 2003 Elsevier B.V. All rights reserved.  
Descriptors--Author Keywords: immunological tolerance loss ; erythrocyte cryptic antigens ; Th1/Th2 and IL10/IL12 cytokines imbalance ; autoimmune hemolytic anaemia

73/7,DE/34 (Item 2 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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11299635 Genuine Article#: 633WG Number of References: 23  
Title: Genome-based peptide fingerprint scanning  
Author(s): Giddings MC (REPRINT) ; Shah AA; Gesteland R; Moore B

Corporate Source: Univ N Carolina, Dept Microbiol & Immunol, Chapel Hill//NC/27599 (REPRINT); Univ N Carolina, Dept Microbiol & Immunol, Chapel Hill//NC/27599; Univ N Carolina, Dept Biomed Engrn, Chapel Hill//NC/27599; Univ Utah, Dept Human Genet, Salt Lake City//UT/84112  
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 2003, V100, N1 (JAN 7), P20-25  
ISSN: 0027-8424 Publication date: 20030107  
Publisher: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418 USA

Language: English Document Type: ARTICLE

Abstract: We have implemented a method that identifies the genomic origins of sample proteins by scanning their peptide-mass fingerprint against the theoretical translation and proteolytic digest of an entire genome. Unlike previously reported techniques, this method requires no predefined ORF or protein annotations. Fixed-size windows along the genome sequence are scored by an equation accounting for the number of matching peptides, the number of missed enzymatic cleavages in each peptide, the number of in-frame stop codons within a window, the adjacency between peptides, and duplicate peptide matches. Statistical significance of matching regions is assessed by comparing their scores to scores from windows matching randomly generated mass data. Tests with samples from *Saccharomyces cerevisiae* mitochondria and *Escherichia coli* have demonstrated the ability to produce statistically significant identifications, agreeing with two commonly used programs, PEPTIDENT and MASCOT, in 86% of samples analyzed. This genome fingerprint scanning method has the potential to aid in genome annotation, identify proteins for which annotation is incorrect or missing, and handle cases where sequencing errors have caused framing mistakes in the databases. It might also aid in the identification of proteins in which recoding events such as frameshifting or stop-codon read-through have occurred, elucidating alternative translation mechanisms. The prototype is implemented as a **client/server** pair, allowing the distribution, among a set of cluster nodes, of a single or multiple genomes for concurrent analysis.

73/7,DE/35 (Item 3 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
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06615143 Genuine Article#: ZE661 Number of References: 49  
Title: Cooperation in R&D in the pharmaceutical industry - The **network** as an organizational innovation governing technological innovation

Author(s): Staropoli C (REPRINT)  
Corporate Source: UNIVERSITE PARIS I PANTHEON SORBONNE, CTR ATOM, 90 RUE TOLBIAC/F-75231 PARIS 05//FRANCE/ (REPRINT)  
Journal: TECHNOVATION, 1998, V18, N1 (JAN), P13-23  
ISSN: 0166-4972 Publication date: 19980100  
Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD, OXON, ENGLAND OX5 1GB

Language: English Document Type: ARTICLE

Abstract: This paper aims at understanding the historical emergence of the network organizational form of partners in the pharmaceutical industry following the development of biotechnologies. Unlike the situation in other high-tech industries, the network, as a governance structure for cooperative relationships, is still marginal in this industry compared to complex but 'classical' forms of cooperation (R&D agreements,

cross-licensing, joint ventures, mergers/acquisitions). Only two pharmaceutical companies have adopted such an organizational form to govern their cooperation in R&D. Referring to other industries, the network could be considered as an efficient alternative in the context of high technological uncertainties associated with biotechnologies and of industrial restructuring leading to the globalization of innovative practices and processes.

After an Introduction, in Section 2 we discuss the link between technological innovation and organizational innovation to highlight the emergence of a multiplicity of institutional arrangements governing cooperation in R&D. Among all these hybrid forms, the network raises organizational issues since it short-circuits traditional strategic operations in the pharmaceutical industry. In Section 3 we define what we call a 'tight' network, referring to this particular institutional arrangement. In Section 4 we consider the empirical case of Rh (o) over cap ne-Poulenc Rorer, and **identify** the main reasons which have influenced the creation of a network of partners focusing on gene therapy, Rh (o) over cap ne-Poulenc Rorer-Gencell. (C) 1998 Elsevier Science Ltd. All rights reserved.

73/7,DE/36 (Item 4 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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05299720 Genuine Article#: VN827 Number of References: 91  
Title: MULTIMEDIA **DATABASES**  
Author(s): NARASIMHALU AD  
Corporate Source: NATL UNIV SINGAPORE, INST SYST SCI, HENG MUI KENG  
TERRACE/SINGAPORE 119597//SINGAPORE/  
Journal: MULTIMEDIA SYSTEMS, 1996, V4, N5 (OCT), P226-249  
ISSN: 0942-4962  
Language: ENGLISH Document Type: ARTICLE  
Abstract: The rapidly growing interest in building multimedia tools and applications has created a need for the development of multimedia **database management** systems (MMDBMSs) as a tool for efficient organization, storage and retrieval of multimedia objects. We begin with a word about traditional **database management** systems (DBMSs). Then we present an overview of the MMDBMS research issues, challenges, methods, models, and architectures. We review the state of the art and research contributions from related disciplines. Finally, we consider possibilities and probabilities for MMDBMS research in the future.  
Descriptors--Author Keywords: MULTIMEDIA **DATABASE MANAGEMENT** SYSTEMS (MMDBMS) ; **DATABASE** MODELS ; **MANAGEMENT** OF INTERFACES, OBJECTS, QUERIES, STORAGE, TRANSACTIONS ; MMDBMS ARCHITECTURE

73/7,DE/37 (Item 5 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2004 Inst for Sci Info. All rts. reserv.

05186948 Genuine Article#: VF943 Number of References: 17  
Title: PHENODB - AN INTEGRATED CLIENT/**SERVER DATABASE** FOR LINKAGE AND POPULATION-GENETICS  
Author(s): CHEUNG KH; NADKARNI P; SILVERSTEIN S; KIDD JR; PAKSTIS AJ;

MILLER P; KIDD KK

Corporate Source: YALE UNIV,SCH MED,CTR MED INFORMAT/NEW HAVEN//CT/06510;  
YALE UNIV,SCH MED,DEPT ANESTHESIOLOG/NEW HAVEN//CT/06510; YALE UNIV,SCH  
MED,DEPT GENET/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT BIOL/NEW  
HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT PSYCHIAT/NEW HAVEN//CT/06510

Journal: COMPUTERS AND BIOMEDICAL RESEARCH, 1996, V29, N4 (AUG), P327-337  
ISSN: 0010-4809

Language: ENGLISH Document Type: ARTICLE

Abstract: In this paper we describe PhenoDB, an Internet-accessible client/  
**server database** application for population and linkage  
genetics. PhenoDB stores genetic marker data on pedigrees and  
populations. A database for population and linkage genetics requires  
two core functions: data management tasks, such as interactive  
validation during data entry and editing, and data analysis tasks, such  
as generating summary population statistics and performing linkage  
analyses. In PhenoDB we attempt to make these tasks as easy as  
possible. The client/server architecture allows efficient management  
and manipulation of large datasets via an easy-to-use graphical  
interface. PhenoDB data (73 populations, 34 pedigrees, approximately  
4200 individuals, and close to 80,000 typings) are stored in a generic  
format that can be readily exported to (or imported from) the file  
formats required by various existing analysis programs such as LIPED  
and Lathrop and Lalouel's Multipoint Linkage. PhenoDB allows  
performance of complex ad-hoc queries and can generate reports for use  
in project management. Finally, PhenoDB can produce statistical  
summaries such as allele frequencies, phenotype frequencies, and  
Chi-square tests of Hardy-Weinberg ratios of population/pedigree data.  
(C) 1996 Academic Press, Inc.

73/7,DE/38 (Item 6 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2004 Inst for Sci Info. All rts. reserv.

05130345 Genuine Article#: VB993 Number of References: 14

Title: DNA WORKBENCH - A **DATABASE** PACKAGE TO **MANAGE** REGIONAL  
PHYSICAL MAPPING

Author(s): NADKARNI P; CHEUNG KH; CASTIGLIONE C; MILLER P; KIDD K

Corporate Source: YALE UNIV,SCH MED,CTR MED INFORMAT/NEW HAVEN//CT/06510;  
YALE UNIV,SCH MED,DEPT ANESTHESIOLOG/NEW HAVEN//CT/06510; YALE UNIV,SCH  
MED,DEPT GENET/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT PSYCHIAT/NEW  
HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT BIOL/NEW HAVEN//CT/06510

Journal: JOURNAL OF COMPUTATIONAL BIOLOGY, 1996, V3, N2 (SUM), P319-329

ISSN: 1066-5277

Language: ENGLISH Document Type: ARTICLE

Abstract: DNA Workbench (DW) is a client-**server database** to  
**manage physical mapping** data that will form the basis for  
sequencing and efforts in biologically interesting regions of a  
chromosome, DW draws maps at different levels of resolution in either  
of two modes: proportional, when the sizes of objects and the physical  
distances between them are known accurately or approximately, and  
nonproportional, when most physical distance information in a region is  
not available, but order information is, DW interacts with the user  
primarily through the map graphic, Selection of individual objects on  
the graphic lets the user inspect and modify the underlying data, DW  
also manages dependency tracking between map objects and has a  
rudimentary form of version control, It is currently used to manage  
information on the DRD2 region on chromosome 11, and on the HOX region



of chromosome 17.  
Descriptors--Author Keywords: CLIENT-SERVER ; RELATIONAL  
DATABASES ; GENOMIC MAPPING

73/7,DE/39 (Item 1 from file: 95)  
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01247500 I98101461300  
File allocation designs for distributed multimedia information  
**networks**  
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IEICE Transactions on Communications, vE81-B, n8, pp1647-1655, 1998  
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Record type: Abstract  
ISSN: 0916-8516

ABSTRACT:

In this paper, we study the optimal allocation of multimedia files in distributed network systems. In these systems, the files are shared by users connected with different servers geographically separated, and each file must be stored in at least one of servers. Users can access any files stored in any server connected with high-speed communication networks. Copies of the files accessed frequently are to be stored in several **servers** that have **databases**. Therefore, one of the most important problems is how to assign the files to servers in view of costs and delays. Considering these problems in heterogeneous network environments, we present a new system model that covers a wide range of multimedia network applications like VOD, CALS, and so on. In these systems, it is obvious that there is trade-off relationship between costs and delays. Our objective is to find the optimal file allocation such that the total cost is minimized subject to the total delay. We introduce a 0-1 integer programming formulation for the optimization problem, and find the optimal file allocation by solving these formulae.

DESCRIPTORS: DISTRIBUTED DATABASES; FILE MANAGEMENT;  
INFORMATION NETWORKS; INTEGER OPTIMIZATION; MINIMISATION; COSTING; DELAY--  
RETARDATION; MULTIMEDIA COMMUNICATION; TELECOMMUNICATION COMPUTING

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01059633 E96120444367  
Internet mit Windows NT. Internet-Information-Server  
Kuppinger, M  
NT und BackOffice Magazin, v47, nSonderheft 32-Bit-Desktop, pp57-59, 1997  
Document type: journal article Language: German  
Record type: Abstract  
ISSN: 0948-678X

ABSTRACT:

Der Internet-Information-Server (IIS) von Microsoft vereinigt als integrierter Bestandteil von Windows NT 4.0 die Funktionen eines WWW-, Gopher- und FTP-Servers fuer die Veroeffentlichung von HTML-Dokumenten, den

Dateizugriff und den Dateitransfer. Die SSL (Secure Sockets Library) erlaubt den Aufbau sicherer **Client-Server**-Verbindungen durch Datenverschlüsselung. Der Internet **Database** Connector (**IDC**) ermöglicht den Zugriff auf Datenbanken von HTML-Dokumenten aus. Mit dem Internet-Dienstmanager, einem grafischen Verwaltungsprogramm, koennen auch entfernte Server administriert werden. Fuer jeden einzelnen Dienst koennen separat Zugriffsrechte definiert werden. Auf dem IIS koennen - zum Beispiel zur Vereinfachung der Domaenenverwaltung - mehrere virtuelle Server auf einem System definiert werden. Mit virtuellen Verzeichnissen koennen unterschiedlich verteilte HTML-Dokumente in einer einheitlichen Struktur bereitgehalten werden. IIS 2.0 enthaelt gegenueber der ersten Version folgende Erweiterungen: Unterstuetzung von Host-Headern, die den Hostnamen physischer Server zum Browser zurueckliefern, HTTP Byte-Bereich zum Kopieren von Dateiteilen, erweiterte Log-Funktionen zur Protokollierung erfolgreicher Transaktionen und von Fehlern, Uebersetzung von SQL-Daten in HTML-Format, Zugriff auf Server-Variablen zur Ausgabensteuerung, Administrationsprogramm, grafisches Programm zur Datenverschlüsselung.

DESCRIPTORS: **CLIENT SERVER** SYSTEMS; OPERATING SYSTEM--COMPUTERS  
; ACCESS; CIPHERING--ENCRYPTION; DATA TRANSMISSION; DATA CONVERSION PROGRAM  
; DATA BANK; DATA NETWORK ADMINISTRATION; VIRTUAL MACHINES; FILE MANAGEMENT  
; COMPUTER NETWORKS; INTERCONTINENTAL NETWORKS; DOCUMENT; ACCESS CONTROL;  
DISTRIBUTED COMPUTING

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00644161 E93024088022  
Supporting physical independence in an object **database server**  
(Physikalische Datenabhaengigkeit in Objektdatenbanken)  
Aloia, N; Barneva, S; Rabitti, F  
IEI-CNR Pisa, I; CNUCE-CNR, Pisa, I  
ECOOP '92, European Conference on Object-Oriented Programming, Utrecht, NL,  
June 29 - July 3, 1992  
Document type: Conference paper Language: English  
Record type: Abstract  
ISBN: 3-540-55668-0; 0-387-55668-0

ABSTRACT:

An approach for supporting physical independence in Object **Database Servers** is proposed in this paper. While in current implementations the strategy for storing data objects reflects the logical object definitions, a certain degree of independence in the physical database organization would be essential to meet specific performance requirements. In this paper, a canonical object data model and a storage object data model are presented. In the first, the objects are organized in classes; in the second, physical objects with similar structures are grouped in collections. Mechanisms for mapping data structures and operations from the logical level to the physical level are discussed, and a comprehensive example is given.

DESCRIPTORS: DATA BANK; DATA MODELS; DATA FORMAT; CLASS; **DATABASE**  
**MANAGEMENT** SYSTEM  
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